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2019 年 6 月

Section B

Directions: In this section, you are going to read a passage with ten statements attached to it. Each statement contains information given in one of the paragraphs. Identify the paragraph from which the information is derived. You may choose a paragraph more than once. Each paragraph is marked with a letter. Answer the questions by marking the corresponding letter on Answer Sheet 2.

第一套 The best Retailers Combine Bricks and Clicks

The best Retailers Combine Bricks and Clicks

A) Retail profits are falling sharply. Stores are closing. Malls are emptying. The depressing stories just keep coming. Reading the earnings announcements of large retail stores like Macy's, Nordstorm, and Target is about as uplifting as a tour of an intensive care unit. The internet is apparently taking down yet another industry. Brick and mortar stores(实体店) seem to be going the way of the yellow pages. Sure enough, the Census Bureau just released data showing that online retail sales surged 15.2 percent between the first quarter of 2015 and the first quarter of 2016.

B) But before you dump all of your retail stocks, there are more facts you should consider. Looking only at that 15.2 percent "surge" would be misleading. It was an increase that was on a small base of 6.9 percent. Even when a tiny number grows by a large percentage terms, it is often still tiny.

C) More than 20 years after the internet was opened to commerce, the Census Bureau tells us that brick and mortar sales accounted for 92.3 percent of retail sales in the first quarter of 2016. Their data show that only 0.8 percent of retail sales shifted from offline to online between the beginning of 2015 and 2016.

D) So, despite all the talk about drone(无人机) deliveries to your doorstep, all the retail executives expressing anxiety over consumers going online, and even a Presidential candidate exclaiming that Amazon has a "huge antitrust problem," the Census data suggest that physical retail is thriving. Of course, the closed stores, depressed executives, and sinking stocks suggest otherwise. What's the real story?

E) Many firms operating brick and mortar stores are in trouble. The retail industry is getting "reinvented," as we describe in our new book Matchmakers. It's standing in the path of what Schumpeter called a gale(大风) of creative destruction. That storm has been brewing for some time, and as it has reached gale force, most large retailers are searching for a response. As the CFO of Macy's put it recently, "We're frankly scratching our heads."

F) But it's not happening as experts predicted. In the peak of the dot.com bubble, brick and mortar retail was one of these industries the internet was going to kill - and quickly. The dot.com bust discredited most predictions of that sort and in the years that followed, conventional retailers' confidence in the future increased as Census continued to report weak online sales. And then the gale hit.

G) It is becoming increasingly clear that retail reinvention isn't a simple battle to the death between bricks and clicks. It is about devising retail models that work for people who are making increasing use of a growing array of internet-connected tools to change how they search, shop, and buy. Creative retailers are using the new technologies to innovate just about everything stores do from managing inventory, to marketing, to getting paid.

H) More than drones dropping a new supply of underwear on your doorstep, Apple's massively successful brick-and-mortar-and-glass retail stores and Amazon's small steps in the same direction are what should keep old-fashioned retailers awake at night. Not to mention the large number of creative new retailers, like Bonobos, that are blending online and offline experiences in creative ways.

I) Retail reinvention is not a simple process, and it's also not happening on what used to be called "Internet Time." Some internet-driven changes have happened quickly, of course. Craigslist quickly overtook newspaper classified ads and turned newspaper economics upside down. But many widely anticipated changes weren't quick, and some haven't really started. With the benefit of hindsight(后见之明), it looks like the internet will transform the economy at something like the pace of other great inventions like electricity. B2B commerce, for example, didn't move mainly online by 2005 as many had predicted in 2000, nor even by 2016, but that doesn't mean it won't do so over the next few decades.

J) But the gale is still blowing. The sudden decline in foot traffic in recent years, even though it hasn't been accompanied by a massive decline in physical sales, is a critical warning. People can shop more efficiently online and therefore don't need to go to as many stores to find what they want. There's a surplus of physical shopping space for the crowds, which is one reason why stores are downsizing and closing.

K) The rise of the mobile phone has recently added a new level of complexity to the process of retail reinvention. Even five years ago most people faced a choice. Sit at your computer, probably at home or at the office, search and browse, and buy. Or head out to the mall, or Main Street, look and shop, and buy. Now, just about everyone has a smartphone, connected to the internet almost everywhere almost all the time. Even when a retailer gets a customer to walk in the store, she can easily see if there's a better deal online or at another store nearby.

L) So far, the main thing many large retailers have done in response to all this is to open online stores, so people will come to them directly rather than to Amazon and its smaller online rivals. Many are having the same problem that newspapers have had. Even if they get online traffic, they struggle to make enough money online to compensate for what they are losing offline.

M) A few seem to be making this work. Among large traditional retailers, Walmart recently reported the best results, leading its stock price to surge, while Macy's, Target, and Nordstrom's dropped. Yet Walmart's year-over-year online sales only grew 7 percent, leading its CEO to lament(哀叹), "Growth here is too slow." Part of the problem is that almost two decades after Amazon filed the one-click patent, the online retail shopping and buying experience is filled with frictions. A recent study graded more than 600 internet retailers on how easy it was for consumers to shop, buy, and pay. Almost half of the sites didn't get a passing grade and only 18 percent got an A or B.

N) The turmoil on the ground in physical retail is hard to square with the Census data.

Unfortunately, part of the explanation is that the Census retail data are unreliable. Our deep look into those data and their preparation revealed serious problems. It seems likely that Census simply misclassifies a large chunk of online sales. It is certain that the Census procedures, which lump the online sales of major traditional retailers like Walmart with "non-store retailers" like food trucks, can mask major changes in individual retail categories. The bureau could easily present their data in more useful ways, but they have chosen not to.

O) Despite the turmoil, brick and mortar won't disappear any time soon. The big questions are which, if any, of the large traditional retailers will still be on the scene in a decade or two because they have successfully reinvented themselves, which new players will operate busy stores on Main Streets and maybe even in shopping malls, and how the shopping and buying experience will have changed in each retail category. Investors shouldn't write off brick and mortar. Whether they should bet on the traditional players who run those stores now is another matter.

36. Although online retailing has existed for some twenty years, nearly half of the internet retailers still fail to receive satisfactory feedback from consumers, according to a recent survey.

37. Innovative retailers integrate internet technologies with conventional retailing to create new retail models.

38. Despite what the Census data suggest, the value of physical retail's stocks has been dropping.

39. Internet-driven changes in the retail industry didn't take place as quickly as widely anticipated.

40. Statistics indicate that brick and mortar sales still made up the lion's share of the retail business.

41. Companies that successfully combine online and offline business models may prove to be a big concern for traditional retailers.

42. Brick and mortar retailers' faith in their business was strengthened when the dot. com bubble burst.

43. Despite the tremendous challenges from online retailing, traditional retailing will be here to stay for quite some time.

44. With the rise of online commerce, physical retail stores are like to suffer the same fate as the yellow pages.

45. The wide use of smartphone has made it more complex for traditional retailers to reinvent their business.

第二套 Companies Are Working with Consumers to Reduce Waste

Companies Are Working with Consumers to Reduce Waste

A) As consumers, we are very wasteful. Annually, the world generates 1.3 billion tons of solid waste. This is expected to go up to 2.2 billion by 2025. The developed countries are responsible for 44% of waste, and in the U. S. alone, the average person throws away their

body weight in rubbish every month.

B) Conventional wisdom would seem to suggest that companies have no incentive to lengthen the life cycle of their products and reduce the revenue they would get from selling new goods. Yet, more and more businesses are thinking about how to reduce consumer waste. This is partly driven by the rising price of raw materials and metals. It is also partly due to both consumers and companies becoming more aware of the need to protect our environment.

C) When choosing what products to buy and which brands to buy from, more and more consumers are looking into sustainability. This is opposed to just price and performance they were concerned about in the past. In a survey of 54 of the world's leading brands, almost all of them reported that consumers are showing increasing care about sustainable lifestyles. At the same time, surveys on consumers in the U.S. and the U. K. show that they also care about minimizing energy use and reducing waste.

D) For the most part, consumers control what happens to a product. But some companies are realizing that placing the burden of recycling entirely on the consumer is not an effective strategy, especially when tossing something away seems like the easiest and most convenient option.

E) Some retailers and manufacturers in the clothing, footwear, and electronics industries have launched environmental programs. They want to make their customers interested in preserving their products and preventing things that still have value from going to the garbage dump. By offering services to help expand the longevity of their products, they're promising quality and durability to consumers, and receiving the reputational gains for being environmentally friendly.

F) For example, the Swedish jeans company Nudie Jeans offers free repair at twenty of their shops. Instead of discarding their old worn-out jeans, customers bring them in to be renewed. The company even provides mail-order repair kits and online videos, so that customers can learn how to fix a pair of jeans at home. Their philosophy is that extending the life of a pair of jeans is not only great for the environment, but allows the consumer to get more value out of their product. When customers do want to toss their pair, they can give them back to the store, which will repurpose and resell them. Another clothing company, Patagonia, a high-end outdoor clothing store, follows the same principle. It has partnered with DIY website iFixit to teach consumers how to repair their clothing, such as waterproof outerwear, at home. The company also offers a repair program for their customers for a modest fee. Currently, Patagonia repairs about 40,000 garments a year in their Reno, Nevada, service center. According to the company's CEO, Rose Marcario, this is about building a company that cares about the environment. At the same time, offering repair supports the perceived quality of its products.

G) In Brazil, the multinational corporation Adidas has been running a shoe-recycling program called "Sustainable Footprint" since 2012. Customers can bring shoes of any brand into an Adidas store to be shredded and turned into alternative fuels for energy creation instead of being burned as trash. They are used to fuel cement ovens. To motivate visitors to bring in more old shoes, Adidas Brazil promotes the program in stores by showing videos to educate customers, and it even offers a discount each time a customer brings in an old pair of shoes. This boosts the reputation and image of Adidas by making people more aware of

the company's values.

H) Enormous opportunities also lie with e-waste. It is estimated that in 2014 the world produced some 42 million metric tons of e-waste (discarded electrical and electronic equipment and its parts) with North America and Europe accounting for 8 and 12 million metric tons respectively. The materials from e-waste include iron, copper, gold, silver, and aluminum- materials that could be reused, resold, salvaged, or recycled. Together, the value of these metals is estimated to be about \$ 52 billion. Electronics giants like Best Buy and Samsung have provided e-waste take-back programs over the past few years, which aim to refurbish(翻新) old electronic components and parts into new products.

I) For other companies interested in reducing waste, helping the environment, and providing the sustainable lifestyles that consumers seek, here are some first steps for building a relationship with customers that focuses on recycling and restoring value to products:

J) Find partners. If you are a manufacturer who relies on outside distributors, then retailers are the ideal partner for collecting old products. Power tool maker DeWalt partners with companies, such as Lowes and Napa Auto Parts, to collect old tools at their stores for recycling. The partnership benefits both sides by allowing unconventional partners (for example, two companies from two different industries) to work together on a specific aspect of the value chain, like, in this example, an engine firm with an accessory one.

K) Create incentives. Environmental conscientiousness isn't always enough to make customers recycle old goods. For instance, DeWalt discovered that many contractors were holding on to their old tools, even if they no longer worked, because they were expensive purchases and it was hard to justify bringing them in to recycle. By offering instant discounts worth as much as \$ 100, DeWalt launched a trade-in program to encourage people to bring back tools. As a result, DeWalt now reuses those materials to create new products.

L) Start with a trial program, and expect to change the details as you go. Any take-back program will likely change over time, depending on what works for your customers and company goals. Maybe you see low customer participation at first, or conversely, so much success that the cost of recycling becomes too high. Best Buy, for instance, has been bearing the lion's share of e-waste volume since two of its largest competitors, Amazon and Wal-mart, do not have their own recycling programs. Since the launch of its program, Best Buy changed its policy to add a \$ 25 fee for recycling old televisions in order to keep the program going.

M) Build a culture of collective values with customers. A stronger relationship between the retailer/producer and the consumer isn't just about financial incentives. By creating more awareness around your efforts to reduce waste, and by developing a culture of responsibility, repair, and reuse, you can build customer loyalty based on shared values and responsibilities.

N) These examples are just the tip of the iceberg, but they demonstrate how helping customers get more use of their materials can transform value chains and operations. Reducing waste by incorporating used materials into production can cut costs and decrease the price of procurement(采购): less to be procured from the outside and more to be re-utilized from the inside.

O) Companies play a big role in creating a circular economy, in which value is generating less from extracting new resources and more from getting better use out of the resources we already have - but they must also get customers engaged in the process.

36. Some companies believe that products' prolonged lifespan benefits both the environment and customers.
37. A survey shows shoppers today are getting more concerned about energy conservation and environmental protection when deciding what to buy.
38. Companies can build customer loyalty by creating a positive culture of environmental awareness.
39. When companies launch environmental programs, they will have their brand reputation enhanced.
40. One multinational company offers discounts to customers who bring in old footwear to be used as fuel.
41. Recycling used products can help manufacturers reduce production costs.
42. Electronic products contain valuable metals that could be recovered.
43. It seems commonly believed that companies are not motivated to prolong their products' lifespan.
44. It is advisable for companies to partner with each other in product recycling.
45. Some businesses have begun to realize it may not be effective to let consumers take full responsibility for recycling.

第三套 The future of personal satellite technology is here - are we ready for it?

The future of personal satellite technology is here - are we ready for it?

A) Satellites used to be the exclusive playthings of rich governments and wealthy corporations. But increasingly, as space becomes more democratized, they are coming within reach of ordinary people. Just like drones(无人机) before them, miniature satellites are beginning to fundamentally transform our conceptions of who gets to do what up above our heads.

B) As a recent report from the National Academy of Sciences highlights, these satellites hold tremendous potential for making satellite-based science more accessible than ever before. However, as the cost of getting your own satellite in orbit drops sharply, the risks of irresponsible use grow. The question here is no longer "Can we?" but "Should we?" What are the potential downsides of having a slice of space densely populated by equipment built by people not traditionally labeled as "professionals"? And what would the responsible and beneficial development and use of this technology actually look like? Some of the answers may come from a nonprofit organization that has been building and launching amateur satellites for nearly 50 years.

C) Having your personal satellite launched into orbit might sound like an idea straight out of science fiction. But over the past few decades a unique class of satellites has been created that fits the bill: CubeSats. The "Cube" here simply refers to the satellite's shape. The most common CubeSat is a 10cm cube, so small that a single CubeSat could easily be mistaken for a paperweight on your desk. These mini-satellites can fit in a launch vehicle's formerly "wasted space." Multiples can be deployed in combination for more complex missions than

could be achieved by one CubeSat alone.

D) Within their compact bodies these minute satellites are able to house sensors and communications receivers/transmitters that enable operators to study Earth from space, as well as space around Earth. They're primarily designed for Low Earth Orbit (LEO) - an easily accessible region of space from around 200 to 800 miles above Earth, where human-tended missions like the Hubble Space Telescope and the International Space Station (ISS) hang out. But they can attain more distant orbits; NASA plans for most of its future Earth-escaping payloads (to the moon and Mars especially) to carry CubeSats.

E) Because they're so small and light, it costs much less to get a CubeSat into Earth's orbit than a traditional communications or GPS satellite. For instance, a research group here at Arizona State University recently claimed their developmental small CubeSats could cost as little as \$3,000 to put in orbit. This decrease in cost allows researchers, hobbyists and even elementary school groups to put simple instruments into LEO or even having them deployed from the ISS.

F) The first CubeSat was created in the early 2000s, as a way of enabling Stanford graduate students to design, build, test and operate a spacecraft with similar capabilities to the USSR's Sputnik(前苏联的人造卫星). Since then, NASA, the National Reconnaissance Office and even Boeing have all launched and operated CubeSats. There are more than 130 currently in operation. The NASA Educational Launch of Nano Satellite program, which offers free launches for educational groups and science missions, is now open to U.S. nonprofit corporations as well. Clearly, satellites are not just for rocket scientists anymore.

G) The National Academy of Sciences report emphasizes CubeSats' importance in scientific discovery and the training of future space scientists and engineers. Yet it also acknowledges that widespread deployment of LEO CubeSats isn't risk-free. The greatest concern the authors raise is space debris - pieces of "junk" that orbit the earth, with the potential to cause serious damage if they collide with operational units, including the ISS.

H) Currently, there aren't many CubeSats and they're tracked closely. Yet as LEO opens up to more amateur satellites, they may pose an increasing threat. As the report authors point out, even near-misses might lead to the "creation of a burdensome regulatory framework and affect the future disposition of science CubeSats."

I) CubeSat researchers suggest that now's the time to ponder unexpected and unintended possible consequences of more people than ever having access to their own small slice of space. In an era when you can simply buy a CubeSat kit off the shelf, how can we trust the satellites over our heads were developed with good intentions by people who knew what they were doing? Some "expert amateurs" in the satellite game could provide some inspiration for how to proceed responsibly.

J) In 1969, the Radio Amateur Satellite Corporation (AMSAT) was created in order to foster ham radio enthusiasts'(业余无线电爱好者) participation in space research and communication. It continued the efforts, begun in 1961, by Project OSCAR - a U.S.-based group that built and launched the very first nongovernmental satellite just four years after Sputnik. As an organization of volunteers, AMSAT was putting "amateur" satellites in orbit decades before the current CubeSat craze. And over time, its members have learned a thing or two about responsibility. Here, open-source development has been a central principle. Within the organization, AMSAT has a philosophy of open sourcing everything—making

technical data on all aspects of their satellites fully available to everyone in the organization, and when possible, the public. According to a member of the team responsible for FOX 1-A, AMSAT's first CubeSat, this means that there's no way to sneak something like explosives or an energy emitter into an amateur satellite when everyone has access to the designs and implementation.

K) However, they're more cautious about sharing information with nonmembers, as the organization guards against others developing the ability to hijack and take control of their satellites. This form of "self-governance" is possible within long-standing amateur organizations that, over time, are able to build a sense of responsibility to community members, as well as society in general. But what happens when new players emerge, who don't have deep roots within the existing culture?

L) Hobbyists and students are gaining access to technologies without being part of a long-standing amateur establishment. They're still constrained by founders, launch providers and a series of regulations - all of which rein in what CubeSat developers can and cannot do. But there's a danger they're ill-equipped to think through potential unintended consequences. What these unintended consequences might be is admittedly far from clear. Yet we know innovators can be remarkably creative with taking technologies in unexpected directions. Think of something as seemingly benign as the cellphone - we have microfinance and text-based social networking at one end of the spectrum, and improvised(临时制作的) explosive devices at the other.

M) This is where a culture of social responsibility around CubeSats becomes important-not simply to ensure that physical risks are minimized, but to engage with a much larger community in anticipating and managing less obvious consequences of the technology. This is not an easy task. Yet the evidence from AMSAT and other areas of technology development suggests that responsible amateur communities can and do emerge around novel technologies. The challenge here, of course, is ensuring that what an amateur community considers to be responsible, actually is. Here's where there needs to be a much wider public conversation that extends beyond government agencies and scientific communities to include students, hobbyists, and anyone who may potentially stand to be affected by the use of CubeSat technology.

36. Given the easier accessibility to space, it is time to think about how to prevent misuse of satellites.

37. A group of mini-satellites can work together to accomplish more complex tasks.

38. The greater accessibility of mini-satellites increases the risks of their irresponsible use.

39. Even school pupils can have their CubeSats put in orbit owing to the lowered launching cost.

40. AMSAT is careful about sharing information with outsiders to prevent hijacking of their satellites.

41. NASA offers to launch CubeSats free of charge for educational and research purposes.

42. Even with constraints, it is possible for some creative developers to take the CubeSat technology in directions that result in harmful outcomes.

43. While making significant contributions to space science, CubeSats may pose hazards to other space vehicles.

44. Mini-satellites enable operators to study Earth from LEO and space around it.

45. AMSAT operates on the principle of having all its technical data accessible to its members, preventing the abuse of amateur satellites.

2019 年 12 月

Section B

Directions: In this section, you are going to read a passage with ten statements attached to it. Each statement contains information given in one of the paragraphs. Identify the paragraph from which the information is derived. You may choose a paragraph more than once. Each paragraph is marked with a letter. Answer the questions by marking the corresponding letter on Answer Sheet 2.

第一套 Increased Screen Time and Wellbeing Decline in Youth

Increased Screen Time and Wellbeing Decline in Youth

A) Have young people never had it so good? Or do they face more challenges than any previous generation? Our current era in the West is one of high wealth. This means minors enjoy material benefits and legal protections that would have been the envy of those living in the past. But There is an increasing suspicion that all is not well for our youth. And one of the most popular explanations, among some experts and the popular media, is that excessive "screen time" is to blame. (This refers to all the attention young people devote to their phones, tablets and laptops.) However, this is a contentious theory and such claims have been treated skeptically by some scholars based on their reading of the relevant data.

B) Now a new study has provided another contribution to the debate, uncovering strong evidence that adolescent wellbeing in the United States really is experiencing a decline and arguing that the most likely cause is the electronic riches we have given them. The background to this is that from the 1960s into the early 2000s, measures of average wellbeing went up in the US. This was especially true for younger people. It reflected the fact that these decades saw a climb in general standards of living and avoidance of mass societal traumas like full-scale war or economic deprivation. However, the "screen time" hypothesis, advanced by researchers such as Jean Twenge, is that electronic devices and excessive time spent online may have reversed these trends in recent years, causing problems for young people's psychological health.

C) To investigate, Twenge and her colleagues dived into the "Monitoring the Future" dataset based on annual surveys of American school students from grades 8, 10, and 12 that started in 1991. In total, 1.1 million young people answered various questions related to their wellbeing. Twenge's team's analysis of the answers confirmed the earlier, well-established wellbeing climb, with scores rising across the 1990s, and into the later 2000s, this was found across measures like self-esteem, life satisfaction, happiness and satisfaction with individual domains like job, neighborhood, or friends. But around 2012 these measures started to decline. This continued through 2016, the most recent year for which data is available.

D) Twenge and her colleagues wanted to understand why this change in average wellbeing occurred. However, it is very hard to demonstrate causes using non-experimental data such

as this. In fact, when Twenge previously used this data to suggest a screen time effect, some commentators were quick to raise this problem. They argued that her causal-sounding claims rested on correlational data, and that she had not adequately accounted for other potential causal factors. This time around, Twenge and her team make a point of saying that they are not trying to establish causes as such, but that they are assessing the plausibility of potential causes.

E) First, they explain that if a given variable is playing a role in affecting wellbeing, then we should expect any change in that variable to correlate with the observed changes in wellbeing. If not, it is not plausible that the variable is a causal factor. So the researchers looked at time spent in a number of activities that could plausibly be driving the wellbeing decline. Less sport, and fewer meetings with peers correlated with lower wellbeing, as did less time reading print media (newspapers) and, surprisingly, less time doing homework. (This last finding would appear to contradict another popular hypothesis that it is our burdening of students with assignment that is causing all the problems.) In addition, more TV watching and more electronic communication both correlated with lower wellbeing. All these effects held true for measures of happiness, life satisfaction and self-esteem, with the effects stronger in the 8th and 10th-graders.

F) Next, Twenge's team dug a little deeper into the data on screen time. They found that adolescents who spent a very small amount of time on digital devices - a couple of hours a week- had the highest wellbeing. Their wellbeing was even higher than those who never used such devices. However, higher doses of screen time were clearly associated with lower happiness. Those spending 10-19 hours per week on their devices were 41 percent more likely to be unhappy than lower-frequency users. Those who used such devices 40 hours a week or more (one in ten teenagers) were twice as likely to be unhappy. The data was slightly complicated by the fact that there was a tendency for kids who were social in the real world to also use more online communication, but by bracketing out different cases it became clear that the real-world sociality component correlated with greater wellbeing, whereas greater time on screens or online only correlated with poorer wellbeing.

G) So far, so plausible. But the next question is, are the drops in average wellbeing happening at the same time as trends toward increased electronic device usage? It looks like it - after all, 2012 was the tipping point when more than half of Americans began owning smartphones. Twenge and her colleagues also found that across the key years of 2013-16, wellbeing was indeed lowest in years where adolescents spent more time online, on social media, and reading news online, and when more youth in the United States had smartphones. And in a second analysis, they, found that where technology went, dips in wellbeing followed. For instance, years with a larger increase in online usage were followed by years with lower wellbeing, rather than the other way around. This does not prove causality, but is consistent with it. Meanwhile, TV use did not show this tracking. TV might make you less happy, but this is not what seems to be driving the recent declines in young people's average happiness.

H) A similar but reversed pattern was found for the activities associated with greater wellbeing. For example, years when people spent more time with friends were better years for wellbeing (and followed by better years). Sadly, the data also showed face-to-face socializing and sports activity had declined over the period covered by the survey.

I) There is another explanation that Twenge and her colleagues wanted to address; the impact of the great recession of 2007-2009, which hit a great number of American families and might be affecting adolescents. The dataset they used did not include economic data, so instead the researchers looked at whether the 2013-16 wellbeing decline was tracking economic indicators. They found some evidence that some crude measures, like income inequality, correlated with changes in wellbeing, but economic measures with a more direct impact, like family income and unemployment rates (which put families into difficulties), had no relationship with wellbeing. The researchers also note the recession hit some years before we see the beginning of the wellbeing drop, and before the steepest wellbeing decline, which occurred in 2013.

J) The researchers conclude that electronic communication was the only adolescent activity that increased at the same time psychological wellbeing declined. I suspect that some experts in the field will be keen to address alternative explanations, such as unassessed variables playing a role in the wellbeing decline. But the new work does go further than previous research and suggests that screen time should still be considered a potential barrier to young people's flourishing.

36. The year when most Americans began using smartphones was identified as a turning point in young Americans' level of happiness.

37. Scores in various wellbeing measures began to go downward among young Americans in recent years.

38. Unfortunately, activities involving direct contact with people, which contributed to better wellbeing were found to be on the decline.

39. In response to past critics, Twenge and her co-researchers stress they are not trying to prove that the use of digital devices reduces young people's wellbeing.

40. In the last few decades of the 20th century, living standards went up and economic depressions were largely averted in the US.

41. Contrary to popular belief, doing homework might add to students' wellbeing.

42. The author believes the researchers' new study has gone a step further regarding the impact of screen time on wellbeing.

43. The researchers found that extended screen time makes young people less happy.

44. Data reveals that economic inequality rather than family income might affect people's wellbeing.

45. Too much screen time is widely believed to be the cause of unhappiness among today's young people.

第二套 How Much Protein Do You Really Need?

How Much Protein Do You Really Need?

A) The marketing is tempting: Get stronger muscles and healthier bodies with minimal effort by adding protein powder to your morning shake or juice drink. Or grab a protein bar at lunch or for a quick snack. Today, you can find protein supplements everywhere - online or at the pharmacy, grocery store or health food store. They come in powders, pills and bars. With more than \$12 billion in sales this year, the industry is booming and, according to the

market research company, Grand View Research, is on track to sell billions more by 2025. But do we really need all this supplemental protein? It depends. There are pros, cons and some other things to consider.

B) For starters, protein is critical for every cell in our body. It helps build nails, hair, bones and muscles. It can also help you feel fuller longer than eating foods without protein. And, unlike nutrients that are found only in few foods, protein is present in all foods. "The typical American diet is a lot higher in protein than a lot of us think," says registered dietitian Angela Pipitone. "It's in foods many of us expect, such as beef, chicken and other types of meat and dairy. But it's also in foods that may not come immediately to mind like vegetables, fruit, beans and grains."

C) The U.S. government's recommended daily allowance (RDA) for the average adult is 50 to 60 gram of protein a day. This may sound like a lot, but Pipitone says: "We get bits of protein here and there and that really adds up throughout the day." Take, for example. breakfast. If you eat two eggs topped with a little bit of cheese and an orange on the side, you already have 22 grams of protein. Each egg gives you 7 grams, the cheese gives you about 6 grams and the orange - about 2 grams. Add a lunch of chicken, rice and broccoli(西兰花), and you are already over the recommended 50 grams. "You can get enough protein and meet the RDA before you even get to dinner," says Pipitone.

D) So if it's so easy to get your protein in food, why add more in the form of powders, snack bars or a boost at your local juice bar? No need to, says Pipitone, because, in fact, most of us already get enough protein in our diet. "Whole foods are always the best option rather than adding supplements," she says, noting the FDA does not regulate supplements as rigorously as foods or drugs. So there could be less protein, more sugar and some additives you wouldn't expect, such as caffeine(咖啡因).

E) If you are considering a supplement, read the list of ingredients, she says, although this is not always reliable. "I've seen very expensive protein supplements that claim to be high quality but they might not really be beneficial for the average healthy adult," she says. "It could just be a waste of money."

F) But there are certain situations that do warrant extra protein. "Anytime you're repairing or building muscle," Pipitone says, such as if you're an extreme endurance athlete, training for a marathon, or you're a body builder. If you're moderately exercising for 150 minutes a week, as the Centers for Disease Control and Prevention recommends, or less than that, you're probably not an extreme athlete. Extreme athletes expend lots of energy breaking down and repairing and building muscles. Protein can give them the edge they need to speed that process.

G) Vegans can benefit from protein supplements since they do not eat animal-based protein sources like meat, dairy or eggs. And, for someone always on-the-go who may not have time for a meal, a protein snack bar can be a good option for occasional meal replacement. Also, individuals recovering from surgery or an injury can also benefit from extra protein. So, too, can older people. At around age 60, "muscles really start to break down," says Kathryn Starr, an aging researcher, and because of that, the protein needs of an older adult actually increase.

H) In fact, along with her colleague Connie Bales. Starr recently conducted a small study that found that adding extra protein foods to the diet of obese older individuals who were trying

to lose weight strengthened their muscles. Participants in the study were separated into two groups - one group was asked to eat 30 grams of protein per meal in the form of whole foods. That meant they were eating 90 grams of protein a day. The other group - the control group - was put on a typical low-calorie diet with about 50 to 60 grams of protein a day. After six months, researchers found the high protein group had significantly improved their muscle function - almost twice as much as the control group. "They were able to walk faster, had improved balance, and were also able to get up out of a chair faster than the control group," Starr says. All 67 participants were over 60 years of age, and both groups lost about the same amount of weight.

I) Starr is now looking into whether high-protein diets also improve the quality of the muscle itself in seniors. She's using CT scans to measure muscle size and fat, and comparing seniors on a high-protein diet with those on regular diets. She says her findings should be available in a couple of months.

J) In the meantime, 70-year-old Corliss Keith, who was in the high protein group in Starr's latest study, says she feels a big difference. "I feel excellent," she says. "I feel like I have a different body. I have more energy. I'm stronger." She says she is able to take Zumba exercise classes three times a week, work out on the treadmill(跑步机), and take long, brisk walks. Keith also lost more than 15 pounds. "I'm a fashionable person, so now I'm back in my 3-inch heels," she says.

K) As people age, Starr says muscle strength is key to helping them stay strong and continue living on their own in their own home. "I feel very much alive now," says Keith. "I feel like I could stay by myself until I'm 100."

L) But can people overdo protein? Pipitone says you do have to be careful. Other researchers say too much protein can cause cramps(痉挛), headaches, and fatigue. Dehydration(脱水) is also a risk when you eat too much protein. Pipitone says if you increase protein, you also have to increase your fluid intake. "I always tell people to make sure they're drinking enough fluids," which for the average person is 60 to 70 ounces a day, which translates into eight 8-ounce glasses of water or liquid per day.

M) There have been some indications that extra protein makes the kidneys work harder, which could be problematic for individuals with a history of kidney disease and for them, the supplements may increase the risk of kidney stones, she says.

N) Bottom line, if you think you need more protein in your diet, consider these questions: Are you an extreme athlete; are you recovering from injury or surgery; or are you 60 years or older? If so, adding high protein foods like eggs and meat products to your diet can be beneficial. And, if you're not sure, it is always a good idea to check with your primary care provider.

36. It is quite easy for one to take in the recommended amount of protein.

37. Pipitone claims that healthy adults need not spend money on protein supplements.

38. The protein supplement business is found to be thriving.

39. Protein can speed the repairing of damaged muscles.

40. Protein supplements may overburden some internal organ, thus leading to its malfunctioning.

41. Older adults need to take in more protein to keep their muscles strong.

42. Protein is found in more foods than people might realize.

43. Additional protein was found to help strengthen the muscles of overweight seniors seeking weight loss.
44. Pipitone believes that whole foods provide the best source of protein.
45. People are advised to drink more liquid when they take in more protein.

第三套 Why More Farmers Are Making The Switch to Grass-Fed Meat and Dairy

Why More Farmers Are Making The Switch to Grass-Fed Meat and Dairy

A) Though he didn't come from a farming family, from a young age Tim Joseph was fascinated by the idea of living off the land. Reading magazines like The Stockman Grass Farmer and Graze, he got hooked on the idea of grass-fed agriculture. The idea that all energy and wealth come from the sun really intrigued him. He thought the shorter the distance between the sun and the end product, the higher the profit to the farmer.

B) Joseph wanted to put this theory to the test. In 2009, he and his wife Laura launched Maple Hill Creamery, an organic, all grass-fed yogurt company in northern New York. He quickly learned what the market has demonstrated: Demand for grass-fed products currently exceeds supply. Grass-fed beef is enjoying a 25-30% annual growth rate. Sales of grass-fed yogurt and kefir(发酵乳饮品), on the other hand, have in the last year increased by over 38%. This is in comparison with a drop of just under 1% in the total yogurt and kefir market, according to natural and organic market research company SPINS. Joseph's top priority became getting his hands on enough grass-fed milk to keep customers satisfied, since his own 64-cow herd wasn't going to suffice.

C) His first partnership was with Paul and Phyllis Amburgh, owners of the Dharma Lea farm in New York. The Amburghs, too, were true believers in grass-fed. In addition to supplying milk from their own 85-head herd, they began to help other farmers in the area convert from conventional to certified organic and grass-fed in order to enter the Maple Hill supply chain. Since 2010, the couple has helped 125 small dairy farms convert to grass-fed, with more than 80% of those farms coming on board during the last two years.

D) All this conversion has helped Maple Hill grow 40-50% every year since it began, with no end in sight. Joseph has learned that a farmer has to have a certain mindset to successfully convert. But convincing open-minded dairy people is actually not that hard, when you look at the economics. Grass fed milk can fetch up to 2.5 times the price of conventional milk. Another factor is the squeeze that conventional dairy farmers have felt as the price of grain they feed their cows has gone up, tightening their profit margins. By replacing expensive grain feed with regenerative management practices, grass-fed farmers are insulated from jumps in the price of feed. These practices include grazing animals on grasses grown from the pastureland's natural seed bank, and fertilized by the cows' own fertilizer.

E) Champions of this type of regenerative grazing also point to its animal welfare, climate and health benefits: Grass-fed animals live longer out of confinement. Grazing herds stimulate microbial(微生物的) activity in the soil, helping to capture water and separate carbon. And grass-fed dairy and meat have been shown to be higher in certain nutrients and

healthy fats.

F) In the grass-fed system, farmers are also not subject to the wildly fluctuating milk prices of the international commodity market. The unpredictability of global demand and the lag-time it takes to add more cows to a herd to meet demand can result in events like the recent cheese surplus. Going grass-fed is a safe refuge, a way for family-scale farms to stay viable. Usually a farmer will get to the point where financially, what they're doing is not working. That's when they call Maple Hill. If the farm is well managed and has enough land, and the desire to convert is sincere, a relationship can begin. Through regular regional educational meetings, a large annual meeting, individual farm visits and thousands of phone calls, the Amburghs pass on the principles of pasture management. Maple Hill signs a contract pledging to buy the farmer's milk at a guaranteed base price, plus quality premiums and incentives for higher protein, butter-fat and other solids.

G) While Maple Hill's conversion program is unusually hands-on and comprehensive, it's just one of a growing number of businesses committed to slowly changing the way America farms. Joseph calls sharing his knowledge network through peer-to-peer learning a core piece of the company's culture. Last summer, Massachusetts grass-fed beef advocate John Smith launched Big Picture Beef, a network of small grass-fed beef farms in New England and New York that is projected to bring to market 2,500 head of cattle from 125 producers this year. Early indications are that Smith will have no shortage of farm members. Since he began to informally announce the network at farming conferences and on social media, he's received a steady stream of inquiries from interested farmers.

H) Smith says he'll provide services ranging from formal seminars to on-farm workshops on holistic(整体的) management, to one-on-one hand-holding and an almost 24/7 phone hotline for farmers who are converting. In exchange, he guarantees an above-market price for each animal and a calf-to-customer electronic ear tag ID system like that used in the European Union.

I) Though advocates portray grass fed products as a win-win situation for all, they do have downsides. Price, for one, is an issue. Joseph says his products are priced 10-20% above organic versions, but depending on the product chosen, compared to non-organic conventional yogurt, consumers could pay a premium of 30-50% or more for grass-fed. As for the meat, Smith says his grass-fed hamburger will be priced 20-25% over the conventional alternative. But a look at the prices on online grocer Fresh Direct suggests a grass-fed premium of anywhere from 35-60%.

J) And not every farmer has the option of going grass-fed. For both beef and dairy production, it requires, at least in the beginning, more pastureland. Grass-fed beef production tends to be more labor-intensive as well. But Smith counters that if you factor in the hidden cost of government corn subsidies, environment degradation, and decreased human health and animal welfare, grass-fed is the more cost-effective model. "The sun provides the lowest cost of production and the cheapest meat," he says.

K) Another grass-fed booster spurring farmers to convert is EPIC, which makes meat-based protein bars. Founders Taylor Collins and his wife, Katie Forrest, used to be endurance athletes; now they're advocates of grass-fed meat. Soon after launching EPIC's most successful product - the Bison Bacon Cranberry Bar - Collins and Forrest found they'd exhausted their sources for bison(北美野牛) raised exclusively on pasture. When they started

researching the supply chain, they learned that only 2-3% of all bison is actually grass-fed. The rest is feed - lot confined and fed grain and corn.

L) But after General Mills bought EPIC in 2016, Collins and Forrest suddenly had the resources they needed to expand their supply chain. So the company teamed up with Wisconsin-based rancher Northstar Bison. EPIC fronted the money for the purchase of \$2.5 million worth of young bison that will be raised according to its grass-fed protocols, with a guaranteed purchase price. The message to young people who might not otherwise be able to afford to break into the business is, "You can Purchase this \$3 million piece of land here, because I'm guaranteeing you today you'll have 1,000 bison on it.' We're bringing new blood into the old, conventional farming ecosystem, which is really cool to see," Collins explains.

36. Farmers going grass-fed are not affected by the ever-changing milk prices of the global market.

37. Over the years, Tim Joseph's partners have helped many dairy farmers to switch to grass-fed.

38. One advocate believes that many other benefits should be taken into consideration when we assess the cost-effectiveness of grass-fed farming.

39. Many dairy farmers were persuaded to switch to grass-fed when they saw its advantage in terms of profits.

40. Tim Joseph's grass-fed program is only one example of how American farming practice is changing.

41. Tim Joseph was fascinated by the notion that sunlight brings energy and wealth to mankind.

42. One problem with grass-fed products is that they are usually more expensive than conventional ones.

43. Grass-fed products have proved to be healthier and more nutritious.

44. When Tim Joseph started his business, he found grass-fed products fell short of demand.

45. A snack bar producer discovered that the supply of purely grass-fed bison meat was scarce.

2020 年 6 月

Section B

Directions: In this section, you are going to read a passage with ten statements attached to it. Each statement contains information given in one of the paragraphs. Identify the paragraph from which the information is derived. You may choose a paragraph more than once. Each paragraph is marked with a letter. Answer the questions by marking the corresponding letter on Answer Sheet 2.

2020 年 7 月(伪 6 月 第一套) Children Understand Far More About Other Minds Than Long Believed

Children Understand Far More About Other Minds Than Long Believed

A) Until a few decades ago, scholars believed that young children know very little, if anything, about what others are thinking. Swiss psychologist Jean Piaget, who is credited with founding the scientific study of children's thinking, was convinced that preschool children cannot consider what goes on in the minds of others. The interviews and experiments he conducted with kids in the middle of the 20th century suggested that they were trapped in their subjective viewpoints, incapable of imagining what others think, feel or believe.

B) Much of the subsequent research on early childhood thinking was highly influenced by Piaget's ideas. Scholars sought to refine his theory and empirically confirm his views. But it became increasingly clear that Piaget seemed to have gravely underestimated the intellectual powers of very young kids before they can make themselves understood by speech. Researchers began to devise ever more ingenious ways of figuring out what goes on in the minds of babies, and the resulting picture of their abilities shows subtle variations. Consequently, the old view of children's egocentric(自我中心的) nature and intellectual weaknesses has increasingly fallen out of favor and become replaced by a more generous position that sees a budding sense not only of the physical world but also of other minds, even in the "youngest young."

C) Historically, children didn't receive much respect for their mental powers. Piaget not only believed that children were "egocentric" in the sense that they were unable to differentiate between their own viewpoint and that of others; he was also convinced that their thinking was characterized by systematic errors and confusions. When playing with others, they don't cooperate because they do not realize there are different roles and perspectives. He was convinced that children literally cannot "get their act together": instead of playing cooperatively and truly together, they play side by side, with little regard for others. And when speaking with others, a young child supposedly cannot consider the listener's viewpoint but "talks to himself without listening to others."

D) Piaget and his followers maintained that children go through something like a dark age of intellectual development before slowly and gradually becoming enlightened by reason and rationality as they reach school age. Alongside this enlightenment develops an ever growing

understanding of other persons, including their attitudes and views of the world.

E) Today, a very different picture of children's mental development emerges. Psychologists continually reveal new insights into the depth of young children's knowledge of the world, including their understanding of other minds. Recent studies suggest that even infants are sensitive to others' perspectives and beliefs.

F) Part of the motivation to revise some of Piaget's conclusions stemmed from an ideological shift about the origin of human knowledge that occurred in the second half of the 20th century. It became increasingly unpopular to assume that a basic understanding of the world can be built entirely from experience. This was in part prompted by theorist Noam Chomsky, who argued that something as complex as the rules of grammar cannot be picked up from exposure to speech, but is supplied by an inborn "language faculty." Others followed suit and defined further "core areas" in which knowledge allegedly cannot be pieced together from experience but must be possessed at birth. One such area is our knowledge of others' minds. Some even argue that a basic knowledge of others' minds is not only possessed by human infants, but must be evolutionarily old and hence shared by our nearest living relatives, the great apes.

G) To prove that infants know more in this realm than had been acknowledged, re-searchers needed to come up with innovative ways of showing it. A big part of why we now reorganize so much more of kids' intellectual capacities is the development of much more sensitive research tools than Piaget had at his disposal.

H) Instead of engaging babies in dialog or having them execute complex motor tasks, the newer methods capitalize on behaviors that have a firm place in infants' natural behavior repertoire: looking, listening, sucking, making facial expressions, gestures and simple manual actions. The idea of focusing on these "small behaviors" is that they give kids the chance to demonstrate their knowledge implicitly and spontaneously/without having to respond to questions or instructions. For example, children might look longer at an event that they did not expect to happen, or they might show facial expressions indicating that they have sympathetic concern for others. When researchers measure these less demanding, and often involuntary, behaviors, they can detect a sensitivity to others' mental states at a much younger age than with the more taxing methods that Piaget and his followers deployed.

I) In the 1980s, these kinds of implicit measures became customary in developmental psychology. But it took a while longer before these tools were employed to measure children's grasp of the mental lives of others.

J) In a set of experiments, my colleagues at the University of Southern California and I found evidence that babies can even anticipate how others will feel when their expectations are disappointed. We acted out several puppet(木偶) shows in front of two-year-old children. In these puppet shows, a protagonist (Cookie Monster) left his precious belongings (cookies) onstage and later returned to fetch them. What the protagonist did not know was that an antagonist had come and messed with his possessions. The children had witnessed these acts and attentively watched the protagonist return. We recorded children's facial and bodily expressions. Children bit their lips, wrinkled their nose or wiggled(扭动) in their chair when the protagonist came back, as if they anticipated the bewilderment and disappointment he was about to experience. Importantly, children showed no such reactions and remained calm when the protagonist had seen the events himself and thus knew what to expect. Our study

reveals that by the tender age of two, kids not only track what others believe or expect; they can even foresee how others will feel when they discover reality.

K) Studies like this reveal that there is much more going on in small kids' and even infants' minds than was previously believed. With the explicit measures used by Piaget and successors, these deeper layers of kids' understanding cannot be accessed. The new investigative tools demonstrate that kids know more than they can say: when we scratch beneath the surface, we find an emerging understanding of relations and perspectives that Piaget probably did not dream of.

L) Despite these obvious advances in the study of young children's thinking, it would be a grave mistake to dismiss the careful and systematic analyses compiled by Piaget and others before the new tests dominated the scene because the original methods revealed essential facts about how children think that the new methods cannot uncover.

M) There's no consensus in today's science community about how much we can infer from a look, a facial expression or a hand gesture. These behaviors clearly indicate a curiosity about what goes on in the mind of others, and probably a set of early intuitions coupled with a willingness to learn more. They pave the way to richer and more explicit forms of understanding of the minds of others. But they can in no way replace the child's growing ability to articulate and refine her understanding of how people behave and why.

36. Piaget believed that small children could not collaborate with others while playing.

37. The author and his colleagues' study shows two-year-old may be able to predict other people's feelings.

38. In the latter half of the last century, fewer and fewer people believed the basis for our understanding of the world is wholly empirical.

39. Research conducted by Jean Piaget in the last century suggested babies were insensitive to others' thinking.

40. Our improved understanding of babies' intellectual power is attributable to better research tools.

41. It has been found in recent research that even small babies are sensitive to other people's points of view.

42. Scientists are still debating what inference can be drawn from certain physical expressions of a child.

43. The newer research methods focus on infants' simple behaviors instead of requiring them to answer questions.

44. With the progress in psychology, the traditional view of children's self-centered nature and limited thinking abilities has become less and less influential.

45. Even though marked advances have been made, it is wrong to dismiss Piaget's fundamental contributions to the study of kids' cognitive abilities.

2020 年 9 月 第一套(伪 6 月 第二套) Six Potential Brain Benefits of Bilingual Education

Six Potential Brain Benefits of Bilingual Education

A) Brains, brains, brains. People are fascinated by brain research. And yet it can be hard to point to places where our education system is really making use of the latest neuroscience(神经科学) findings. But there is one happy link where research is meeting practice: bilingual(双语的) education. "In the last 20 years or so, there's been a virtual explosion of research on bilingualism," says Judith Kroll, a professor at the University of California, Riverside.

B) Again and again, researchers have found, "bilingualism is an experience that shapes our brain for life," in the words of Gigi Luk, an associate professor at Harvard's Graduate School of Education. At the same time, one of the hottest trends in public schooling is what's often called dual-language or two-way immersion programs.

C) Traditional programs for English-language learners, or ELLs, focus on assimilating students into English as quickly as possible. Dual-language classrooms, by contrast, provide instruction a cross subjects to both English natives and English learners, in both English and a target language. The goal is functional bilingualism and biliteracy for all students by middle school. New York City, North Carolina, Delaware, Utah, Oregon and Washington state are among the places expanding dual-language classrooms.

D) The trend lies in the face of some of the culture wars of two decades ago, when advocates insisted on "English first" education. Most famously, California passed Proposition 227 in 1998. It was intended to sharply reduce the amount of time that English-language learners spent in bilingual settings. Proposition 58, passed by California voters on November 8, largely reversed that decision, paving the way for a huge expansion of bilingual education in the state that has the largest population of English-language learners.

E) Some of the insistence on English-first was founded on research produced decades ago, in which bilingual students underperformed monolingual(单语的) English speakers and had lower IQ scores. Today's scholars, like Ellen Bialystok at York University in Toronto, say that research was "deeply flawed." "Earlier research looked at socially disadvantaged groups," agrees Antonella Sorace at the University of Edinburgh in Scotland. "This has been completely contradicted by recent research" that compares groups more similar to each other.

F) So what does recent research say about the potential benefits of bilingual education? It turns out that, in many ways, the real trick to speaking two languages consists in man-aging not to speak one of those languages at a given moment - which is fundamentally a feat of paying attention. Saying "Goodbye" to mom and then "Guten tag" to your teacher, or managing to ask for a crayola roja instead of a red crayon(蜡笔), requires skills called "inhibition" and "task switching." These skills are subsets of an ability called executive function.

G) People who speak two languages often outperform monolinguals on general measures of executive function. "Bilinguals can pay focused attention without being distracted and also improve in the ability to switch from one task to another," says Sorace.

H) Do these same advantages benefit a child who begins learning a second language in kindergarten instead of as a baby? We don't yet know. Patterns of language learning and language use are complex. But Gigi Luk at Harvard cites at least one brain-imaging study on adolescents that shows similar changes in brain structure when compared with those who are bilingual from birth, even when they didn't begin practicing a second language in

earnest before late childhood.

I) Young children being raised bilingual have to follow social cues to figure out which language to use with which person and in what setting. As a result, says Sorace, bilingual children as young as age 3 have demonstrated a head start on tests of perspective-taking and theory of mind - both of which are fundamental social and emotional skills.

J) About 10 percent of students in the Portland, Oregon public schools are assigned by lottery to dual language classrooms that offer instruction in Spanish, Japanese or Mandarin, alongside English. Jennifer Steele at American University conducted a four-year, randomized trial and found that these dual-language students outperformed their peers in English-reading skills by a full school-year's worth of learning by the end of middle school. Because the effects are found in reading, not in math or science where there were few differences, Steele suggests that learning two languages makes students more aware of how language works in general.

K) The research of Gigi Luk at Harvard offers a slightly different explanation. She has recently done a small study looking at a group of 100 fourth-graders in Massachusetts who had similar reading scores on a standard test, but very different language experiences. Some were foreign-language dominant and others were English natives. Here's what's interesting. The students who were dominant in a foreign language weren't yet comfortably bilingual; they were just starting to learn English. Therefore, by definition, they had a much weaker English vocabulary than the native speakers. Yet they were just as good at interpreting a text. "This is very surprising," Luk says. "You would expect the reading comprehension performance to mirror the vocabulary - it's a cornerstone of comprehension."

L) How did the foreign-language dominant speakers manage this feat? Well, Luk found, they also scored higher on tests of executive functioning. So, even though they didn't have huge mental dictionaries to draw on, they may have been great puzzle-solvers, taking into account higher-level concepts such as whether a single sentence made sense within an overall story line. They got to the same results as the monolinguals, by a different path.

M) American public school classrooms as a whole are becoming more segregated by race and class. Dual language programs can be an exception. Because they are composed of native English speakers deliberately placed together with recent immigrants, they tend to be more ethnically and economically balanced. And there is some evidence that this helps kids of all backgrounds gain comfort with diversity and different cultures.

N) Several of the researchers also pointed out that, in bilingual education, non-English-dominant students and their families tend to feel that their home language is heard and valued, compared with a classroom where the home language is left at the door in favor of English. This can improve students' sense of belonging and increase parents' involvement in their children's education, including behaviors like reading to children. "Many parents fear their language is an obstacle, a problem, and if they abandon it their child will integrate better," says Antonella Sorace of the University of Edinburgh. "We tell them they're not doing their child a favor by giving up their language."

O) One theme that was striking in speaking to all these researchers was just how strongly they advocated for dual-language classrooms. Thomas and Collier have advised many school systems on how to expand their dual-language programs, and Sorace runs "Bilingualism Matters," an international network of researchers who promote bilingual

education projects. This type of advocacy among scientists is unusual; even more so because the "bilingual advantage hypothesis" is being challenged once again.

P) A review of studies published last year found that cognitive advantages failed to appear in 83 percent of published studies, though in a separate analysis, the sum of effects was still significantly positive. One potential explanation offered by the researchers is that advantages that are measurable in the very young and very old tend to fade when testing young adults at the peak of their cognitive powers. And, they countered that no negative effects of bilingual education have been found. So, even if the advantages are small, they are still worth it. Not to mention one obvious, outstanding fact: "Bilingual children can speak two languages!"

36. A study found that there are similar changes in brain structure between those who are bilingual from birth and those who start learning a second language later.

37. Unlike traditional monolingual programs, bilingual classrooms aim at developing students' ability to use two languages by middle school.

38. A study showed that dual-language students did significantly better than their peers in reading English texts.

39. About twenty years ago, bilingual practice was strongly discouraged, especially in California.

40. Ethnically and economically balanced bilingual classrooms are found to be helpful for kids to get used to social and cultural diversity.

41. Researchers now claim that earlier research on bilingual education was seriously flawed.

42. According to a researcher, dual-language experiences exert a lifelong influence on one's brain.

43. Advocates of bilingual education argued that it produces positive effects though they may be limited.

44. Bilingual speakers often do better than monolinguals in completing certain tasks because they can concentrate better on what they are doing.

45. When their native language is used, parents can become more involved in their children's education.

2020 年 9 月 第二套(伪 6 月 第三套) How Telemedicine Is Transforming Healthcare

How Telemedicine Is Transforming Healthcare

A) After years of big promises, telemedicine is finally living up to its potential. Driven by faster internet connection, ubiquitous(无处不在的) smartphones and changing insurance standards, more health providers are turning to electronic communications to do their jobs - and it's dramatically changing the delivery of healthcare.

B) Doctors are linking up with patients by phone, email and webcam(网络摄像头). They're also consulting with each other electronically - sometimes to make split-second decisions on heart attacks and strokes. Patients, meanwhile, are using new devices to relay their blood pressure, heart rate and other vital signs to their doctors so they can manage chronic

conditions at home. Telemedicine also allows for better care in places where medical expertise is hard to come by. Five to 10 times a day, Doctors Without Borders relays questions about tough cases from its physicians in Niger, South Sudan and elsewhere to its network of 280 experts around the world, and back again via the internet.

C) As a measure of how rapidly telemedicine is spreading, consider: More than 15 million Americans received some kind of medical care remotely last year, according to the American Telemedicine Association, a trade group, which expects those numbers to grow by 30% this year.

D) None of this is to say that telemedicine has found its way into all corners of medicine. A recent survey of 500 tech-savvy(精通技术的) consumers found that 39% hadn't heard of telemedicine, and of those who haven't used it, 42% said they preferred in-person doctor visits. In a poll of 1,500 family physicians, only 15% had used it in their practices - but 90% said they would if it were appropriately reimbursed(补偿).

E) What's more, for all the rapid growth, significant questions and challenges remain. Rules defining and regulating telemedicine differ widely from state to state. Physicians groups are issuing different guidelines about what care they consider appropriate to deliver and in what form.

F) Some critics also question whether the quality of care is keeping up with the rapid expansion of telemedicine. And there's the question of what services physicians should be paid for: Insurance coverage varies from health plan to health plan, and a big federal plan covers only a narrow range of services. Telemedicine's future will depend on how - and whether - regulators, providers, payers and patients can address these challenges. Here's a closer look at some of these issues:

G) Do patients trade quality for convenience? The fastest-growing services in telemedicine connect consumers with clinicians they've never met for a phone, video or email visit on-demand, 24/7. Typically, these are for nonemergency issues such as colds, flu, ear-aches and skin rashes, and they cost around \$45, compared with approximately \$100 at a doctor's office, \$160 at an urgent-care clinic or \$750 and up at an emergency room.

H) Many health plans and employers have rushed to offer the services and promote them as a convenient way for plan members to get medical care without leaving home or work. Nearly three-quarters of large employers will offer virtual doctor visits as a benefit to employees this year, up from 48% last year. Web companies such as Teladoc and American Well are expected to host some 1.2 million such virtual doctor visits this year, up 20% from last year, according to the American Telemedicine Association.

I) But critics worry that such services may be sacrificing quality for convenience. Consulting a random doctor patients will never meet, they say, further fragments the healthcare system, and even minor issues such as upper respiratory(上呼吸道的) infections can't be thoroughly evaluated by a doctor who can't listen to your heart or feel your swollen glands. In a recent study, researchers posing as patients with skin problems sought help from 16 telemedicine sites - with unsettling results. In 62 encounters, fewer than one-third disclosed clinicians' credential or let patients choose; only 32% discussed potential side effects of prescribed medications. Several sites misdiagnosed serious conditions, largely because they failed to ask basic follow-up questions, the researchers said. "Telemedicine holds enormous promise, but these sites are just not ready for prime time," says Jack Resneck, the study's lead author.

J) The American Telemedicine Association and other organizations have started accreditation(鉴定) programs to identify top-quality telemedicine sites. The American Medical Association this month approved new ethical guidelines for telemedicine, calling for participating doctors to recognize the limitations of such services and ensure that they have sufficient information to make clinical recommendations.

K) Who pays for the services? While employers and health plans have been eager to cover virtual urgent care visits, insurers have been far less willing to pay for telemedicine when doctors use phone, email or video to consult with existing patients about continuing issues. "It's very hard to get paid unless you physically see the patient," says Peter Rasmussen, medical director of distance health at the Cleveland Clinic. Some 32 states have passed "parity"(等同的) laws requiring private insurers to reimburse doctors for services delivered remotely if the same service would be covered in person, though not necessarily at the same rate or frequency. Medicare lags further behind. The federal health plan for the elderly covers a small number of telemedicine services - only for beneficiaries in rural areas and only when the services are received in a hospital, doctor's office or clinic.

L) Bills to expand Medicare coverage of telemedicine have bipartisan(两党的) support in Congress. Opponents worry that such expansion would be costly for taxpayers, but advocates say it would save money in the long run.

M) Experts say more hospitals are likely to invest in telemedicine systems as they move away from fee-for-service payments and into managed-care-type contracts that give them a set fee to provide care for patients and allow them to keep any savings they achieve.

N) Is the state-by-state regulatory system outdated? Historically, regulation of medicine has been left to individual states. But some industry members contend that having 50 different sets of rules, licensing fees and even definitions of "medical practice" makes less sense in the era of telemedicine and is hampering its growth. Currently, doctors must have a valid license in the state where the patient is located to provide medical care, which means virtual-visit companies can match users only with locally licensed clinicians. It also causes administrative hassles(麻烦) for world-class medical centers that attract patients from across the country. At the Mayo Clinic, doctors who treat out-of-state patients can follow up with them via phone, email or web chats when they return home, but they can only discuss the conditions they treated in person. "If the patient wants to talk about a new problem, the doctor has to be licensed in that state to discuss it. If not, the patient should talk to his primary-care physician about it," says Steve Ommen, who runs Mayo's Connected Care program.

O) To date, 17 states have joined a compact that will allow a doctor licensed in one member state to quickly obtain a license in another. While welcoming the move, some telemedicine advocates would prefer states to automatically honor one another's licenses, as they do with drivers' licenses. But states aren't likely to surrender control of medical practice, and most are considering new regulations. This year, more than 200 telemedicine-related bills have been introduced in 42 states, many regarding what services Medicaid will cover and whether payers should reimburse for remote patient monitoring. "A lot of states are still trying to define telemedicine," says Lisa Robbin, chief advocacy officer for the Federation of State Medical Boards.

36. An overwhelming majority of family physicians are willing to use telemedicine if they are duly paid.

37. Many employers are eager to provide telemedicine service as a benefit to their employees because of its convenience.
38. Different states have markedly different regulations for telemedicine.
39. With telemedicine, patients in regions short of professional medical service are able to receive better medical care.
40. Unlike employers and health plans, insurers have been rather reluctant to pay for some telemedicine services.
41. Some supporters of telemedicine hope states will accept each other's medical practice licenses as valid.
42. The fastest growing area for telemedicine services is for lesser health problems.
43. As telemedicine spreads quickly, some of its opponents doubt whether its service quality can be guaranteed.
44. The results obtained by researchers who pretended to be patients seeking help from telemedicine providers are disturbing.
45. Some people argue that the fact that different states have different regulations concerning medical services hinders the development of telemedicine.

2020 年 12 月

Section B

Directions: In this section, you are going to read a passage with ten statements attached to it. Each statement contains information given in one of the paragraphs. Identify the paragraph from which the information is derived. You may choose a paragraph more than once. Each paragraph is marked with a letter. Answer the questions by marking the corresponding letter on Answer Sheet 2.

第一套 Why lifelong learning is the international passport to SUCCESS

Why lifelong learning is the international passport to success

A) Picture yourself at a college graduation day, with a fresh cohort(一群) of students about to set sail for new horizons. What are they thinking while they throw their caps in the air? What is it with this thin sheet of paper that makes it so precious? It's not only the proof of acquired knowledge but plays into the reputation game of where you were trained. Being a graduate from Harvard Law School carries that extra glamour, doesn't it? Yet take a closer look, and the diploma is the perfect ending to the modern tragedy of education.

B) Why? Because universities and curricula are designed along the three unities of French classical tragedy: time, action, and place. Students meet at the university campus (unity of place) for classes (unity of action) during their 20s (unity of time). This classical model has traditionally produced prestigious universities, but it is now challenged by the digitalisation of Society - which allows everybody who is connected to the internet to access learning - and by the need to acquire skills in step with a fast-changing world. Universities must realise that learning in your 20s won't be enough. If technological diffusion and implementation develop faster, workers will have to constantly refresh their skills.

C) The university model needs to evolve. It must equip students with the right skills and knowledge to compete in a world 'where value will be derived largely from human interaction and the ability to invent and interpret things that machines cannot', as the English futurist Richard Watson puts it. By teaching foundational knowledge and up-to-date skills, universities will provide students with the future-proof skills of lifelong learning, not just get them 'job-ready'.

D) Some universities already play a critical role in lifelong learning as they want to keep the value of their diplomas. This new role comes with a huge set of challenges, and needs largely to be invented. One way to start this transformation process could be to go beyond the 'five-year diploma model' to adapt curricula to lifelong learning. We call this model the lifelong passport.

E) The Bachelor's degree could be your passport to lifelong learning. For the first few years, students would 'learn to learn' and get endowed with reasoning skills that remain with them for the rest of their lives. For instance, physics allows you to observe and rationalise the world,

but also to integrate observations into models and, sometimes, models into theories or laws that can be used to make predictions. Mathematics is the language used to formulate the laws of physics or economy, and to make rigorous computations that turn into predictions. These two disciplines naturally form the foundational pillars of education in technical universities.

F) Recent advances in computational methods and data science push us into rethinking science and engineering. Computers increasingly become principal actors in leveraging data to formulate question, which requires radically new ways of reasoning. Therefore, a new discipline blending computer science, programming, statistics and machine learning should be added to the traditional foundational topics of mathematics and physics. These three pillars would allow you to keep learning complex technical subjects all your life because numeracy(计算) is the foundation upon which everything else is eventually built.

G) According to this new model, the Master of Science (MSc) would become the first stamp in the lifelong learning journey. The MSc curriculum should prepare students for their professional career by allowing them to focus on acquiring practical skills through projects.

H) Those projects are then interwoven with fast-paced technical modules(模块) learned 'on-the-fly' and 'at will' depending on the nature of the project. If, for instance, your project is developing an integrated circuit, you will have to take a module on advanced concepts in microelectronics. The most critical skills will be developed before the project even starts, in the form of boot camps(短期强化训练), while the rest can be fostered along with the project, putting them to immediate use and thus providing a rich learning context.

I) In addition to technical capabilities, the very nature of projects develops social and entrepreneurial skills, such as design thinking, initiative taking, team leading, activity reporting or resource planning. Not only will those skills be actually integrated into the curriculum but they will be very important to have in the future because they are difficult to automate.

J) After the MSc diploma is earned, there would be many more stamps of lifelong learning over the years. If universities decide to engage in this learning model, they will have to cope with many organisational challenges that might shake their unity of place and action. First, the number of students would be unpredictable. If all of a university's alumni(往届毕业生) were to become students again, the student body would be much bigger than it is now, and it could become unsustainable for the campus in terms of both size and resources. Second, freshly graduated students would mix with professionally experienced ones. This would change the classroom dynamics, perhaps for the best. Project-based learning with a mixed team reflects the reality of the professional world and could therefore be a better preparation for it.

K) Sound like science fiction? In many countries, part-time studying is not exceptional: on average across OECD countries, part-time students in 2016 represented 20 per cent of enrolment in tertiary education. In many countries, this share is higher and can exceed 40 per cent in Australia, New Zealand and Sweden.

L) If lifelong learning were to become a priority and the new norm, diplomas, just like passports, could be revalidated periodically. A time-determined revalidation would ease administration for everybody. Universities as well as employers and employees would know when they have to retrain. For instance, graduates from the year 2000 would have to come

back in 2005.

M) This could fix the main organisational challenges for the university, but not for the learners, due to lack of time, family obligations or funds. Here, online learning might be an option because it allows you to save your 'travel time', but it has its limits. So far, none of the major employers associated with online learning platforms such as Coursera and Udacity has committed to hire or even interview graduates of their new online programmes.

N) Even if time were not an issue, who will pay for lifelong learning? That's the eternal debate: should it be the learner's responsibility, that of his employer, or of the state? For example, in Massachusetts, the healthcare professions require continuing education credits, which are carefully evidenced and documented. Yet the same state's lawyers don't require continuing legal education, although most lawyers do participate in it informally. One explanation is that technology is less of a factor in law than it is in healthcare.

O) Europe has many scenarios, but the French and Swiss ones are interesting to compare. In France, every individual has a right to lifelong learning organised via a personal learning account that is credited as you work. In Switzerland, lifelong learning is a personal responsibility and not a government one. However, employers and the state encourage continuing education either by funding parts of it or by allowing employees to attend it.

P) Universities have a fundamental role to play in this journey, and higher education is in for a change. Just like classical theatre, the old university model produced talent and value for society. We are not advocating its abolition but rather calling for the adaptation of its characteristics to meet the needs of today.

36. Students should develop the key skills before they start a project.

37. By acquiring reasoning skills in the first few years of college, students can lay a foundation for lifelong learning.

38. The easy access to learning and rapid technological changes have brought the traditional model of education under challenge.

39. Unbelievable as it may seem, part-time students constitute a considerable portion of the student body in many universities across the world.

40. Some social and managerial skills, which are not easily automated, will be of great importance to students' future careers.

41. A new model of college education should provide students with the knowledge and skills that will make them more inventive and capable of lifelong learning.

42. A mixed student body may change the classroom dynamics and benefit learning.

43. The question of who will bear the cost of lifelong learning is a topic of constant debate.

44. To the traditional subjects of math and physics should be added a new discipline which combines computer science with statistics and other components.

45. Students who are burdened with family duties might choose to take online courses.

第二套 The Challenges for Artificial Intelligence in Agriculture

The Challenges for Artificial Intelligence in Agriculture

A) A group of corn farmers stands huddled around an agronomist(农学家) and his computer on the side of an irrigation machine in central South Africa. The agronomist has just flown

over the field with a hybrid unmanned aerial vehicle (UAV) that takes off and lands using propellers yet maintains distance and speed for scanning vast hectares of land through the use of its fixed wings.

B) The UAV is fitted with a four spectral band precision sensor that conducts onboard processing immediately after the flight, allowing farmers and field staff to address, almost immediately, any crop abnormalities that the sensor may have recorded, making the data collection truly real-time.

C) In this instance, the farmers and agronomist are looking to specialized software to give them an accurate plant population count. It's been 10 days since the corn emerged and the farmer wants to determine if there are any parts of the field that require replanting due to a lack of emergence or wind damage, which can be severe in the early stages of the summer rainy season.

D) At this growth stage of the plant's development, the farmer has another 10 days to conduct any replanting before the majority of his fertilizer and chemical applications need to occur. Once these have been applied, it becomes economically unviable to take corrective action, making any further collected data historical and useful only to inform future practices for the season to come.

E) The software completes its processing in under 15 minutes producing a plant population count map. It's difficult to grasp just how impressive this is, without understanding that just over a year ago it would have taken three to five days to process the exact same data set, illustrating the advancements that have been achieved in precision agriculture and remote sensing in recent years. With the software having been developed in the United States on the same variety of crops in seemingly similar conditions, the agronomist feels confident that the software will produce a near accurate result.

F) As the map appears on the screen, the agronomist's face begins to drop. Having walked through the planted rows before the flight to gain a physical understanding of the situation on the ground, he knows the instant he sees the data on his screen that the plant count is not correct, and so do the farmers, even with their limited understanding of how to read remote sensing maps.

G) Hypothetically, it is possible for machines to learn to solve any problem on earth relating to the physical interaction of all things within a defined or contained environment by using artificial intelligence and machine learning.

H) Remote sensors enable algorithms(算法) to interpret a field's environment as statistical data that can be understood and useful to farmers for decision-making. Algorithms process the data, adapting and learning based on the data received. The more inputs and statistical information collected, the better the algorithm will be at predicting a range of outcomes. And the aim is that farmers can use this artificial intelligence to achieve their goal of a better harvest through making better decisions in the field.

I) In 2011, IBM, through its R&D Headquarters in Haifa, Israel, launched an agricultural cloud-computing project. The project, in collaboration with a number of specialized IT and agricultural partners, had one goal in mind - to take a variety of academic and physical data sources from an agricultural environment and turn these into automatic predictive solutions for farmers that would assist them in making real-time decisions in the field.

J) Interviews with some of the IBM project team members at the time revealed that the team

believed it was entirely possible to "algorithm" agriculture, meaning that algorithms could solve any problem in the world. Earlier that year, IBM's cognitive learning system, Watson, competed in the game Jeopardy against former winners Brad Rutter and Ken Jennings with astonishing results. Several years later, Watson went on to produce ground-breaking achievements in the field of medicine.

K) So why did the project have such success in medicine but not agriculture? Because it is one of the most difficult fields to contain for the purpose of statistical quantification. Even within a single field, conditions are always changing from one section to the next. There's unpredictable weather, changes in soil quality, and the ever-present possibility that pests and diseases may pay a visit. Growers may feel their prospects are good for an upcoming harvest, but until that day arrives, the outcome will always be uncertain.

L) By comparison, our bodies are a contained environment. Agriculture takes place in nature, among ecosystems of interacting organisms and activity, and crop production takes place within that ecosystem environment. But these ecosystems are not contained. They are subject to climatic occurrences such as weather systems, which impact upon hemispheres as a whole, and from continent to continent. Therefore, understanding how to manage an agricultural environment means taking literally many hundreds if not thousands of factors into account.

M) What may occur with the same seed and fertilizer program in the United States' Midwest region is almost certainly unrelated to what may occur with the same seed and fertilizer program in Australia or South Africa. A few factors that could impact on variation would typically include the measurement of rain per unit of a crop planted, soil type, patterns of soil degradation, daylight hours, temperature and so forth.

N) So the problem with deploying machine learning and artificial intelligence in agriculture is not that scientists lack the capacity to develop programs and protocols to begin to address the biggest of growers' concerns; the problem is that in most cases, no two environments will be exactly alike, which makes the testing, validation and successful rollout of such technologies much more laborious than in most other industries.

O) Practically, to say that AI and Machine Learning can be developed to solve all problems related to our physical environment is to basically say that we have a complete understanding of all aspects of the interaction of physical or material activity on the planet. After all, it is only through our understanding of the 'nature of things' that protocols and processes are designed for the rational capabilities of cognitive systems to take place. And, although AI and Machine Learning are teaching us many things about how to understand our environment, we are still far from being able to predict critical outcomes in fields like agriculture purely through the cognitive ability of machines.

P) Backed by the venture capital community, which is now investing billions of dollars in the sector, most agricultural technology startups today are pushed to complete development as quickly as possible and then encouraged to flood the market as quickly as possible with their products.

Q) This usually results in a failure of a product, which leads to skepticism from the market and delivers a blow to the integrity of Machine Learning technology. In most cases, the problem is not that the technology does not work, the problem is that industry has not taken the time to respect that agriculture is one of the most uncontained environments to manage.

For technology to truly make an impact on agriculture, more effort, skills, and funding is needed to test these technologies in farmers' fields.

R) There is huge potential for artificial intelligence and machine learning to revolutionize agriculture by integrating these technologies into critical markets on a global scale. Only then can it make a difference to the grower, where it really counts.

36. Farmers will not profit from replanting once they have applied most of the fertilizer and other chemicals to their fields.

37. Agriculture differs from the medical science of the human body in that its environment is not a contained one.

38. The agronomist is sure that he will obtain a near accurate count of plant population with his software.

39. The application of artificial intelligence to agriculture is much more challenging than to most other industries.

40. Even the farmers know, the data provided by the UAV is not correct.

41. The pressure for quick results leads to product failure, which, in turn, arouses doubts about the applicability of AI technology to agriculture.

42. Remote sensors are aimed to help farmers improve decision-making to increase yields.

43. The farmer expects the software to tell him whether he will have to replant any parts of his farm fields.

44. Agriculture proves very difficult to quantify because of the constantly changing conditions involved.

45. The same seed and fertilizer program may yield completely different outcomes in different places.

第三套 Slow Hope

Slow Hope

A) Our world is full of - mostly untold - stories of slow hope, driven by the idea that change is possible. They are 'slow' in their unfolding, and they are slow because they come with setbacks.

B) At the beginning of time - so goes the myth - humans suffered, shivering in the cold and dark until the titan(巨人) Prometheus stole fire from the gods. Just as in the myth, technology - first fire and stone tools, and later farming, the steam engine and industry, fossil fuels, chemicals and nuclear power - has allowed us to alter and control the natural world. The myth also reminds us that these advances have come at a price: as a punishment for Prometheus' crime, the gods created Pandora, and they gave her a box filled with evils and curses. When Pandora's box was opened, it unleashed swarms of diseases and disasters upon humankind.

C) Today we can no longer ignore the ecological curses that we have released in our search for warmth and comfort. In engineering and exploiting and transforming our habitat, we have opened tens of thousands of Pandora's boxes. In recent decades, environmental threats have expanded beyond regional boundaries to have global reach and, most hauntingly, are multiplying at a dizzying rate. On a regular basis, we are reminded that we

are running out of time. Year after year, faster and faster, consumption outpaces the biological capacity of our planet. Stories of accelerated catastrophe multiply. We fear the breakdown of the electric grid, the end of non-renewable resources, the expansion of deserts, the loss of islands, and the pollution of our air and water.

D) Acceleration is the signature of our time. Populations and economic activity grew slowly for much of human history. For thousands of years and well into early modern times, world economies saw no growth at all, but from around the mid-19th century and again, in particular, since the mid-20th, the real GDP has increased at an enormous speed, and so has human consumption. In the Middle Ages, households in Central Europe might have owned fewer than 30 objects on average; in 1900, this number had increased to 400, and in 2020 to 15,000. The acceleration of human production, consumption and travel has changed the animate and inanimate spheres. It has echoed through natural processes on which humans depend. Species extinction, deforestation, damming of rivers, occurrence of floods, the depletion of ozone, the degradation of ocean systems and many other areas are all experiencing acceleration. If represented graphically, the curve for all these changes looks rather like that well-known hockey stick: with little change over millennia(数千年) and a dramatic upswing over the past decades.

E) Some of today's narratives about the future seem to suggest that we too, like Prometheus, will be saved by a new Hercules, a divine engineer, someone who will mastermind, maneuver and manipulate our planet. They suggest that geoengineering, cold fusion or faster-than-light spaceships might transcend once and for all the terrestrial constraints of rising temperatures, lack of energy, scarcity of food, lack of space, mountains of waste, polluted water - you name it.

F) Yet, if we envisage our salvation to come from a *deus ex machina*(解围之神), from a divine engineer or a tech solutionist who will miraculously conjure up a new source of energy or another cure-all with revolutionary potency, we might be looking in the wrong place. The fact that we now imagine our planet as a whole does not mean that the 'rescue' of our planet will come with one big global stroke of genius and technology. It will more likely come by many small acts. Global heating and environmental degradation are not technological problems. They are highly political issues that are informed by powerful interests. Moreover, if history is a guide, then we can assume that any major transformations will once again be followed by a huge set of unintended consequences. So what do we do?

G) This much is clear: we need to find ways that help us flatten the hockey-stick curves that reflect our ever-faster pace of ecological destruction and social acceleration. If we acknowledge that human manipulation of the Earth has been a destructive force, we can also imagine that human endeavours can help us build a less destructive world in the centuries to come. We might keep making mistakes. But we will also keep learning from our mistakes.

H) To counter the fears of disaster, we need to identify stories, visions and actions that work quietly towards a more hopeful future. Instead of one big narrative, a story of unexpected rescue by a larger than-life hero, we need multiple stories: we need stories, not only of what Rob Nixon of Princeton University has called the 'slow violence' of environmental degradation (that is, the damage that is often invisible at first and develops slowly and gradually), but also stories of what I call 'slow hope'.

I) We need an acknowledgement of our present ecological plight but also a language of

positive change, visions of a better future. In *The Principle of Hope* (1954-59), Ernst Bloch, one of the leading philosophers of the future, wrote that 'the most tragic form of loss... is the loss of the capacity to imagine that things could be different'. We need to identify visions and paths that will help us imagine a different, more just and more ecological world. Hope, for Bloch, has its starting point in fear, in uncertainty, and in crisis: it is a creative force that goes hand in hand with utopian(乌托邦的) 'wishful images'. It can be found in cultural products of the past - in fairy tales, in fiction, in architecture, in music, in the movies - in products of the human mind that contain 'the outlines of a better world'. What makes us 'authentic' as humans are visions of our 'potential'. In other words: living in hope makes us human.

J) The power of small, grassroots movements to make changes that spread beyond their place of origin can be seen with the Slow Food movement, which began in Italy in the 1980s. The rise of fast-food restaurants after the Second World War produced a society full of cheap, industrially made foodstuffs. Under the leadership of Carlo Petrini, the Slow Food movement began in Piedmont, a region of Italy with a long history of poverty, violence and resistance to oppression. The movement transformed it into a region hospitable to traditional food cultures - based on native plants and breeds of animals. Today, Slow Food operates in more than 160 countries, poor and rich. It has given rise to thousands of projects around the globe, representing democratic politics, food sovereignty, biodiversity and sustainable agriculture.

K) The unscrupulous(无所顾忌的) commodification of food and the destruction of foodstuffs will continue to devastate soils, livelihoods and ecologies. Slow Food cannot undo the irresistible developments of the global food economy, but it can upset its theorists, it can 'speak differently', and it can allow people and their local food traditions and environments to flourish. Even in the United States - the fast-food nation - small farms and urban gardens are on the rise. "The US Department of Agriculture provides an Urban Agriculture Toolkit and, according to a recent report, American millennials(千禧一代) are changing their diets. In 2017, 6 per cent of US consumers claimed to be strictly vegetarian, up from 1 per cent in 2014. As more people realise that 'eating is an agricultural act', as the US poet and environmental activist Wendell Berry put it in 1989, slow hope advances.

36. It seems some people today dream that a cutting-edge new technology might save them from the present ecological disaster.

37. According to one great thinker, it is most unfortunate if we lose the ability to think differently.

38. Urgent attention should be paid to the ecological problems we have created in our pursuit of a comfortable life.

39. Even in the fast-food nation America, the number of vegetarians is on the rise.

40. The deterioration of the ecological system is accelerating because of the dramatic increase of human production and consumption.

41. It is obvious that solutions must be found to curb the fast worsening environment and social acceleration.

42. Many people believe changing the world is possible, though it may take time and involve setbacks.

43. It might be wrong to expect that our world would be saved at one stroke with some

miraculous technology.

44. It is human nature to cherish hopes for a better world.

45. Technology has given us humans the power to change the natural world, but we have paid a price for the change.

2021 年 6 月

Section B

Directions: In this section, you are going to read a passage with ten statements attached to it. Each statement contains information given in one of the paragraphs. Identify the paragraph from which the information is derived. You may choose a paragraph more than once. Each paragraph is marked with a letter. Answer the questions by marking the corresponding letter on Answer Sheet 2.

第一套 What Are the Ethics of CGI Actors - And Will They Replace Real Ones?

What Are the Ethics of CGI Actors - And Will They Replace Real Ones?

A) Digital humans are coming to a screen near you. As computer-generated imagery (CGI) has become cheaper and more sophisticated, the film industry can now convincingly recreate people on screen - even actors who have been dead for decades. The technology's ability to effectively keep celebrities alive beyond the grave is raising questions about public legacies and image rights.

B) Late in 2019, it was announced that US actor James Dean, who died in 1955, will star in a Vietnam War film scheduled for release later this year. In the film, which will be called *Finding Jack*, Dean will be recreated on screen with CGI based on old footage(影片镜头) and photographs, with another actor voicing him. The news was met with excitement by those keen to see Dean digitally brought back to life for only his fourth film, but it also drew sharp criticism. "This is puppeteering the dead for their fame alone," actress Zelda Williams wrote on Twitter. "It sets such an awful precedent for the future of performance." Her father, Robin Williams, who died in 2014, was keen to avoid the same fate. Before his death, he filed a deed protecting the use of his image until 2039, preventing others from recreating him using CGI to appear in a film, TV show or as a hologram(全息影像).

C) The James Dean film is a way to keep the actor's image relevant for younger generations, says Mark Roesler of CMG Worldwide, the firm that represents Dean's estate. "I think this is the beginning of an entire wave," says Travis Cloyd, CEO of Worldwide XR, one of the companies behind the digital recreation of Dean. "Moving into the future, we want James Dean to be brought into different gaming environments, or different virtual reality environments, or augmented reality environments," he says.

D) Other actors have been revived, with the permission of their estates, for advertising purposes: for example, a 2011 advertisement for Dior featured contemporary actress Charlize Theron alongside iconic 20th-century stars Marilyn Monroe, Grace Kelly and Marlene Dietrich. Later, Audrey Hepburn was digitally recreated for a chocolate commercial in 2013. In the same year, a CGI Bruce Lee appeared in a Chinese-language ad for a whisky brand, which offended many fans because Lee was widely known not to drink alcohol at all. "In the last five years, it's become more affordable and more achievable in a whole movie,"

says Tim Webber at UK visual effects firm Framestore, the company behind the Hepburn chocolate ad. Framestore used body doubles with resemblance to Hepburn's facial structure and body shape as a framework for manual animation. The process was extremely difficult and expensive, says Webber, but the technology has moved on.

E) Now, a person can be animated from scratch. "If they're alive today, you can put them in scanning rigs, you can get every detail of their body analysed very carefully and that makes it much easier, whereas working from available photographs is tricky," says Webber, who won an Academy Award for his visual effects work on the 2013 film Gravity. "I also see a lot of actors today who will have the desire to take advantage of this technology: to have their likeness captured and stored for future content," says Cloyd. "They foresee this being something that could give their estates and give their families the ability to make money from their likeness when they're gone."

F) A hidden hazard of digitally recreating a deceased(已故的) celebrity is the risk of damaging their legacy. "We have to respect the security and the integrity of rights holders," says John Canning at Digital Domain, a US firm that created a hologram rapper(说唱艺人) Tupac Shakur, which appeared at the Coachella music festival in 2012, 15 years after his death.

G) Legally, a person's rights to control the commercial use of their name and image beyond their death differ between and even within countries. In certain US states, for example, these rights are treated similarly to property rights, and are transferable to a person's heirs. In California, under the Celebrities Rights Act, the personality rights for a celebrity last for 70 years after their death. "We've got a societal debate going on about access to our public commons, as it were, about famous faces," says Lilian Edwards at Newcastle University, UK. Should the public be allowed to use or reproduce images of famous people, given how iconic they are? And what is in the best interest of a deceased person's legacy may conflict with the desires of their family or the public, says Edwards.

H) A recreation, however lifelike, will never be indistinguishable from a real actor, says Webber. "When we are bringing someone back, representing someone who is no longer alive on the screen, what we are doing is extremely sophisticated digital make-up," he says. "A performance is a lot more than a physical resemblance."

I) As it becomes easier to digitally recreate celebrities and to entirely manufacture on-screen identities, could this kind of technology put actors out of jobs? "I think actors are worried about this," says Edwards. "But I think it will take a very long time." This is partly because of the risk that viewers find virtual humans scary. Edwards cites widespread backlash to the digital recreation of Carrie Fisher as a young Princess Leia in Rogue One, a trick later repeated in the recent Star Wars: The Rise of Skywalker, which was filmed after Fisher's death in 2016. "People didn't like it," she says. "They discovered the uncanny valley(诡异谷)."

J) This refers to the idea that when objects trying to resemble humans aren't quite perfect, they can make viewers feel uneasy because they fall somewhere between obviously non-human and fully human. "That's always a danger when you're doing anything human or human-like," says Webber. "There're a thousand things that could go wrong with a computer-generated facial performance, and any one of those could make it fall into the uncanny valley," he says. "Your brain just knows there's something wrong." The problem often arises around the eyes or mouth, says Webber. "They're the areas that you look at

when you're talking to someone."

K) An unfamiliar digital human that has been created through CGI will also face the same challenge as an unknown actor: they don't have the appeal of an established name. "You have to spend substantial capital in creating awareness around their likeness and making sure people are familiar with who they are," says Cloyd. This is now starting to happen. "The way you pre-sell a movie in a foreign market is based on relevant talent," he says. "I think we're a long way away from having virtual beings that have the ability to pre-sell content."

L) Webber expects that we will see more digital humans on screen. "It's happening because it can happen," he says. Referring to a line from Jurassic Park(侏罗纪公园), he adds: "People are too busy thinking about what they can do to think about whether they should do it."

36. There is an ongoing debate among the public as to whether the images of deceased celebrities should be recreated.

37. The CGI technology allows the image of the deceased James Dean to be presented to young people in new settings.

38. It is very likely that the CGI-recreated image of a deceased celebrity will fail to match the real actor especially in facial expressions.

39. The use of digital technology can bring images of deceased celebrities back to the screen.

40. Recreating a deceased famous actor or actress may violate their legitimate rights.

41. More CGI-recreated images of deceased celebrities are expected to appear on screen.

42. The image of James Dean will be recreated on screen with his voice dubbed by someone else.

43. However advanced the CGI technology is, the recreated image will differ in a way from the real actor.

44. A lot of actors today are likely to make use of the CGI technology to have their images stored for the benefit of their families.

45. Some actors are concerned that they may lose jobs because of the CGI technology.

第二套 How Marconi Gave Us the Wireless World

How Marconi Gave Us the Wireless World

A) A hundred years before iconic figures like Bill Gates and Steve Jobs permeated our lives, an Irish-Italian inventor laid the foundation of the communication explosion of the 21st century. Guglielmo Marconi was arguably the first truly global figure in modern communication. Not only was he the first to communicate globally, he was the first to think globally about communication. Marconi may not have been the greatest inventor of his time, but more than anyone else, he brought about a fundamental shift in the way we communicate.

B) Today's globally networked media and communication system has its origins in the 19th century, when, for the first time, messages were sent electronically across great distances. The telegraph, the telephone, and radio were the obvious predecessors of the Internet, iPods, and mobile phones. What made the link from then to now was the development of wireless communication. Marconi was the first to develop and perfect this system, using the

recently-discovered "air waves" that make up the electromagnetic spectrum.

C) Between 1896, when he applied for his first patent in England at the age of 22, and his death in Italy in 1937, Marconi was at the center of every major innovation in electronic communication. He was also a skilled and sophisticated organizer, an entrepreneurial innovator, who mastered the use of corporate strategy, media relations, government lobbying, international diplomacy, patents, and prosecution. Marconi was really interested in only one thing: the extension of mobile, personal, long-distance communication to the ends of the earth (and beyond, if we can believe some reports). Some like to refer to him as a genius, but if there was any genius to Marconi it was this vision.

D) In 1901 he succeeded in signaling across the Atlantic, from the west coast of England to Newfoundland in the USA, despite the claims of science that it could not be done. In 1924 he convinced the British government to encircle the world with a chain of wireless stations using the latest technology that he had devised, shortwave radio. There are some who say Marconi lost his edge when commercial broadcasting came along; he didn't see that radio could or should be used to frivolous(无聊的) ends. In one of his last public speeches, a radio broadcast to the United States in March 1937, he deplored that broadcasting had become a one-way means of communication and foresaw it moving in another direction, toward communication as a means of exchange. That was visionary genius.

E) Marconi's career was devoted to making wireless communication happen cheaply, efficiently, smoothly, and with an elegance that would appear to be intuitive and uncomplicated to the user - user-friendly, if you will. There is a direct connection from Marconi to today's social media, search engines, and program streaming that can best be summed up by an admittedly provocative exclamation: the 20th century did not exist. In a sense, Marconi's vision jumped from his time to our own.

F) Marconi invented the idea of global communication - or, more straightforwardly, globally networked, mobile, wireless communication. Initially, this was wireless Morse code telegraphy(电报通讯), the principal communication technology of his day. Marconi was the first to develop a practical method for wireless telegraphy using radio waves. He borrowed technical details from many sources, but what set him apart was a self-confident vision of the power of communication technology on the one hand, and, on the other, of the steps that needed to be taken to consolidate his own position as a player in that field. Tracing Marconi's lifeline leads us into the story of modern communication itself. There were other important figures, but Marconi towered over them all in reach, power, and influence, as well as in the grip he had on the popular imagination of his time. Marconi was quite simply the central figure in the emergence of a modern understanding of communication.

G) In his lifetime, Marconi foresaw the development of television and the fax machine, GPS, radar, and the portable hand-held telephone. Two months before he died, newspapers were reporting that he was working on a "death ray," and that he had "killed a rat with an intricate device at a distance of three feet." By then, anything Marconi said or did was newsworthy. Stock prices rose or sank according to his pronouncements. If Marconi said he thought it might rain, there was likely to be a run on umbrellas.

H) Marconi's biography is also a story about choices and the motivations behind them. At one level, Marconi could be fiercely autonomous and independent of the constraints of his own social class. On another scale, he was a perpetual outsider. Wherever he went, he was

never "of" the group; he was always the "other," considered foreign in Britain, British in Italy, and "not American" in the United States. At the same time, he also suffered tremendously from a need for acceptance that drove, and sometimes stained, every one of his relationships.

I) Marconi placed a permanent stamp on the way we live. He was the first person to imagine a practical application for the wireless spectrum, and to develop it successfully into a global communication system - in both terms of the word; that is, worldwide and all-inclusive. He was able to do this because of a combination of factors - most important, timing and opportunity - but the single-mindedness and determination with which he carried out his self-imposed mission was fundamentally character-based; millions of Marconi's contemporaries had the same class, gender, race, and colonial privilege as he, but only a handful did anything with it. Marconi needed to achieve the goal that was set in his mind as an adolescent; by the time he reached adulthood, he understood, intuitively, that in order to have an impact he had to both develop an independent economic base and align himself with political power. Disciplined, uncritical loyalty to political power became his compass for the choices he had to make.

J) At the same time, Marconi was uncompromisingly independent intellectually. Shortly after Marconi's death, the nuclear physicist Enrico Fermi - soon to be the developer of the Manhattan Project - wrote that Marconi proved that theory and experimentation were complementary features of progress. "Experience can rarely, unless guided by a theoretical concept, arrive at results of any great significance... on the other hand, an excessive trust in theoretical conviction would have prevented Marconi from persisting in experiments which were destined to bring about a revolution in the technique of radio-communications." In other words, Marconi had the advantage of not being burdened by preconceived assumptions.

K) The most controversial aspect of Marconi's life - and the reason why there has been no satisfying biography of Marconi until now - was his uncritical embrace of Benito Mussolini. At first this was not problematic for him. But as the regressive(倒退的) nature of Mussolini's regime became clear, he began to suffer a crisis of conscience. However, after a lifetime of moving within the circles of power, he was unable to break with authority, and served Mussolini faithfully (as president of Italy's national research council and royal academy, as well as a member of the Fascist Grand Council) until the day he died - conveniently - in 1937, shortly before he would have had to take a stand in the conflict that consumed a world that he had, in part, created.

36. Marconi was central to our present-day understanding of communication.

37. As an adult, Marconi had an intuition that he had to be loyal to politicians in order to be influential.

38. Marconi disapproved of the use of wireless communication for commercial broadcasting.

39. Marconi's example demonstrates that theoretical concepts and experiments complement each other in making progress in science and technology.

40. Marconi's real interest lay in the development of worldwide wireless communication.

41. Marconi spent his whole life making wireless communication simple to use.

42. Because of his long-time connection with people in power, Marconi was unable to cut himself off from the fascist regime in Italy.

43. In his later years, Marconi exerted a tremendous influence on all aspects of people's life.
44. What connected the 19th century and our present time was the development of wireless communication.
45. Despite his autonomy, Marconi felt alienated and suffered from a lack of acceptance.

第三套 France's beloved cathedral only minutes away from complete destruction

France's beloved cathedral only minutes away from complete destruction

A) Notre Dame Cathedral in the heart of Paris was within "15 to 30 minutes" of complete destruction as firefighters battled to stop flames reaching its bell towers on Monday evening, French authorities have revealed. A greater disaster was averted by members of the Paris fire brigade, who risked their lives to remain inside the burning monument to create a wall of water between the raging fire and the two towers on the west of the building.

B) The revelation of how close France came to losing its most famous cathedral emerged as police investigators questioned workers involved in the restoration of the monument to try to establish the cause of the devastating blaze. Paris prosecutor Remy Heitz said that an initial fire alert was sounded at 6.20 pm on Monday evening but no fire was found. The second alert was sounded at 6.43 pm, and the blaze was discovered on the roof.

C) More than 650 million was raised in a few hours on Tuesday as French business leaders and global corporations announced they would donate to a restoration campaign launched by the president, Emmanuel Macron. But as the emergency services picked through the burnt debris, a row was resurfacing over accusations that the beloved cathedral, immortalised in Victor Hugo's novel, was already crumbling before the fire.

D) The cathedral is owned by the French state and has been at the centre of a years-long dispute over who should finance restoration work of the collapsing staircases, crumbling statues and cracked walls. Jean-Michel Leniaud, the president of the scientific council at the National Heritage Institute, said: "What happened was bound to happen. The lack of adequate maintenance and daily attention to such a majestic building is the cause of this catastrophe." After the blaze was declared completely extinguished, 15 hours after it started, the junior interior minister, Laurent Nunez, said the structure had been saved but remained vulnerable. He praised the actions of the firefighters but admitted the fate of the cathedral had been uncertain. "They saved the main structure, but it all came down to 15-30 minutes," Nunez said.

E) In a surprise televised address on Tuesday evening, Macron said he wanted to see the cathedral rebuilt within five years. "The fire at Notre Dame reminds us that we will always have challenges to overcome," Macron said, "Notre Dame is our history, our literature, the centre of our life. It is the standard by which we measure our distances. It's so many books, so many paintings. It's the cathedral of every French person, even those who have never visited it. This history is ours and so we will rebuild Notre Dame. It is what the French people expect; it is what our history deserves. It is our deep destiny. We will rebuild Notre Dame so it is even more beautiful than before. I want it done in the next five years. We can do it. After

the time of testing comes a time of reflection and then of action."

F) The fire, which had started at the base of the 93-metre spire(尖塔) at about 6.40 pm on Monday, spread through the cathedral's roof, made up of hundreds of oak beams, some dating back to the 13th century. These beams, known as la foret (the forest) because of their density, formed the cross-shaped roof that ran the length of the central part of the cathedral. As hundreds of tourists and Parisians stood and watched the flames leaping from the roof, there was shock and tears as the cathedral spire caught fire, burned and then collapsed into itself.

G) A collection of dramatic videos and photos quickly spread across social media, showing the horrifying destruction, and attracting emotional responses from people all over the world. Indeed, within minutes the fire occupied headlines of every major global newspaper and television network. This is not surprising given Notre Dame Cathedral, meaning "Our Lady", is one of the most recognised symbols of the city of Paris attracting millions of tourists every year.

H) While the world looked on, the 500 firefighters at the scene then battled to prevent the flames from reaching the two main towers, where the cathedral bells hang. If the wooden frame of the towers had caught fire, it could have sent the bells - the largest of which, the Emmanuel Bell, weighs 13 tons - crashing down, potentially causing the collapse of both towers. Police and fire services will spend the next 48 hours assessing the "security and safety" of the 850-year-old structure. Nunez said: "We have identified vulnerabilities throughout the structure, all of which still need securing." As a result, residents of five buildings around the northern side of the cathedral were being temporarily evacuated, he added. Architects have identified three main holes in the structure, in the locations of the spire, the main hall and the upper rooms to the north of the central aisle. Most of the wooden roof beams have been burned, and parts of the concrete holding up the roof have collapsed.

I) The interior minister, Christophe Castaner, visited the cathedral on Tuesday afternoon to see the extent of the devastation. Ash covered the marble diamond-patterned floor and floated in large pools of grey water from the fire hoses. Behind a heap of blackened oak beams that lay piled up where they had fallen, daylight from vast holes in the cathedral roof lit a golden cross over a statue by Nicolas Coustou, which appeared to have escaped damage. Preliminary inspections also suggested the three ornate(装饰华丽的) stained glass "rose" windows appeared to have survived the fire, officials said. However, fire officers have said a complete inventory of the damage will not be possible until the cathedral structure has been deemed safe.

J) The culture minister, Franck Riester, said religious relics saved from the cathedral were being securely held at the Hotel de Ville, and works of art that sustained smoke damage were being taken to the Louvre, the world's largest art museum, where they would be dried out, repaired and stored. Sixteen copper statues that decorated the spire had been removed for restoration only a few days before the fire. Relics at the top of the spire are believed lost as the spire was destroyed. As well as damage from the heat, which firefighters said reached more than 800 °C, experts also need to assess damage from the vast quantities of water firefighters poured into the cathedral. One casualty of this was The Great Organ constructed in the 1730s, which was said to have escaped the flames but been significantly damaged by

water.

K) French political commentators noted the devastating fire had succeeded where Macron had failed in uniting the country. But criticism over the original state of the building is likely to intensify over coming days. Leniaud told La Croix newspaper: "This is not about looking for people to blame. The responsibility is collective because this is the most loved monument in the country." Alexandre Gady, an art historian, agreed. "We've been saying for years that the budget for maintaining historic monuments is too low," Gady said. The Paris prosecutor's office has opened an inquiry into "involuntary destruction by fire", indicating they believe the cause of the blaze was accidental rather than criminal.

36. The total amount of damage to Notre Dame Cathedral can be assessed only when its structure is considered safe.

37. Once again people began to argue whether Notre Dame Cathedral was going to collapse even without the fire.

38. The Notre Dame Cathedral catastrophe was said to have helped unite the French nation.

39. The roof of Notre Dame Cathedral was built with large numbers of densely laid-out wood beams.

40. Renovation workers of Notre Dame Cathedral were questioned to find out the cause of the accident.

41. Had the bell towers' wooden frames burned down, the heavy bells would have crashed down.

42. The timely action of the firefighters prevented the fire from reaching the Cathedral's bell towers.

43. Apart from the fire, the water used to extinguish it also caused a lot of damage to Notre Dame Cathedral.

44. There has been argument over the years as to who should pay for the restoration of Notre Dame Cathedral.

45. News of the Notre Dame Cathedral catastrophe instantly caught media attention throughout the world.

2021 年 12 月

Section B

Directions: In this section, you are going to read a passage with ten statements attached to it. Each statement contains information given in one of the paragraphs. Identify the paragraph from which the information is derived. You may choose a paragraph more than once. Each paragraph is marked with a letter. Answer the questions by marking the corresponding letter on Answer Sheet 2.

第一套 No one in fashion is surprised that Burberry burnt £28 million of stock

No one in fashion is surprised that Burberry burnt £28 million of stock

A. Last week, Burberry's annual report revealed that £28.6 million worth of stock was burnt last year. The news has left investors and consumers outraged but comes as little surprise to those in the fashion industry.

B. The practice of destroying unsold stock, and even rolls of unused fabric, is commonplace for luxury labels. Becoming too widely available at a cheaper price through discount stores discourages full-price sales. Sending products for recycling leaves them vulnerable to being stolen and sold on the black market. Jasmine Bina, CEO of brand strategy agency Concept Bureau explains, "Typically, luxury brands rally around exclusivity to protect their business interests, namely intellectual property and preservation of brand equity(资产)." She stated she had heard rumors of stock burning but not specific cases until this week.

C. Another reason for the commonplace practice is a financial incentive for brands exporting goods to America. United States Customs states that if imported merchandise is unused and destroyed under their supervision, 99% of the duties, taxes or fees paid on the merchandise may be recovered. It is incredibly difficult to calculate how much dead stock currently goes to waste. While there are incentives to do it, there's no legal obligation to report it.

D. A source, who chose to remain anonymous, shared her experience working in a Burberry store in New York in October 2016. "My job was to toss items in boxes so they could be sent to be burned. It was killing me inside because all that leather and fur went to waste and animals had died for nothing. I couldn't stay there any longer, their business practices threw me off the roof." In May this year, Burberry announced it was taking fur out of its catwalk shows and reviewing its use elsewhere in the business. "Even though we asked the management, they refused to give us detailed answers as to why they would do this with their collection," continued the source, who left her role within two weeks. She has since worked with another high-profile, luxury label.

E. In an online forum post, which asked if it's true that Louis Vuitton burned its bags. Ahmed Bouchfaa, who claimed to work for Louis Vuitton, responded that the brand holds sales of old stock for staff members twice a year. Items which have still not sold after several sales are destroyed. "Louis Vuitton doesn't have public sales. They either sell a product at a given price

or discontinue it. This is to make sure that everybody pays the same price for an item," he says. He goes on to disclose the strict guidelines around the employee sales: "You may buy gifts for someone, but they track each item, and if your gift ends up online they know who to ask." One investor commenting on the Burberry figures was reportedly outraged that the unsold goods were not even offered to investors before they were destroyed.

F. Richemont, who owns several luxury brands, hit the headlines in May for taking back £437 million of watches for destruction in the last two years to avoid marked-down prices. It's not just luxury brands either. In October last year, a Danish TV show exposed H&M for burning 12 tonnes of unsold clothing since 2013. In a statement, the high street retailer defended itself by saying that the burnt clothing had failed safety tests: "The products to which the media are referring have been tested in external laboratories. The test results show that one of the products is mold infested and the other product contains levels of lead that are too high. Those products have rightly been stopped in accordance with our safety routines." In March, a report revealed that H&M was struggling with \$4.3 billion worth of unsold stock. The brand told The New York Times that the plan was to reduce prices to move the stock, arguably encouraging consumers to buy and throw away with little thought.

G. Over-production is perhaps the biggest concern for Burberry. While there has been much outrage at the elitist connotation of burning goods rather than making them affordable, executives at the British fashion house are no doubt struggling to defend how they miscalculated production? The waste has been put down to burning old cosmetic stock to make way for their new beauty range. However, while the value of destroyed stock is up from £26.9 million last year, it's an even more significant increase from 2016's figure of £18.8 million, highlighting that this is an ongoing issue.

H. In September 2016, Burberry switched to a "see now, buy now" catwalk show format. The move was a switch to leverage on the coverage of their fashion week show to make stock available immediately to consumers. This is opposed to the traditional format of presenting to the industry, taking orders for production and becoming available in six months' time. While Burberry announced "record-breaking" online reach and engagement, there has been little evidence to suggest that the strategy has had a significant effect on sales, particularly as the hype(炒作) slows across the season. In February they made adjustments to the format, dropping some catwalk items immediately and promising that others would launch in the coming months.

I. In a statement, Burberry denied that switching to "see now, buy now" has had an impact on waste. A Burberry spokesperson further said, "On the occasions when disposal of products is necessary, we do so in a responsible manner. We are always seeking ways to reduce and revalue our waste. This is a core part of our strategy and we have forged partnerships and committed support to innovative organizations to help reach this goal."

J. One such partnership is with Elvis & Kresse, an accessories brand working with reclaimed materials. Co-founder Kresse Wesling said, "Late last year we launched an ambitious five-year partnership with the Burberry Foundation. The main aim of this is to scale our leather rescue project, starting with off-cuts from the production of Burberry leather goods. We are working tirelessly to expand our solutions and would love to welcome anyone to our workshop to come and see what we are doing." At the moment, the partnership only addresses waste at the production stage and not unsold goods.

K. While these are honorable schemes, it makes it harder for Burberry to defend these latest figures. Fifteen years ago, Burberry was at crisis point as their signature check pattern was widely imitated by cheap, imitation brands. It deterred luxury consumers who found their expensive clothing more closely associated with working-class youth culture than a prestigious heritage fashion house. In the year 2004, at the height of over-exposure of the Burberry check, the brand's turnover was £715.5 million. Under Christopher Bailey as creative director they turned the brand around and this past year revenue hit £2.73 billion.

L. Bina believes that brands need to readdress their exclusivity tactic. "Exclusivity is starting to be challenged," she says. "I think that goes hand in hand with how luxury itself is being challenged. Access to fashion, and the brands who police it, are becoming less and less relevant. Things like health, enlightenment, and social and environmental responsibility are the new luxuries. These all come from within, not without. That's the challenge that traditional luxury brands will have to contend within the mid- to long-term future."

36. Burberry's executives are trying hard to attribute their practice of destroying old products to miscalculated production.

37. Selling products at a discount will do greater harm to luxury brands than destroying them.

38. Imitated Burberry products discouraged luxury consumers from buying its genuine products.

39. Staff members of a luxury brand may buy its old stock at cheaper prices, but they are not allowed to resell them.

40. In future traditional luxury brands will have to adapt their business strategies to the changing concepts of luxury.

41. One luxury brand employee quit her job because she simply couldn't bear to see the destruction of unsold products.

42. Destroying old stock is a practice not just of luxury brands but of less prestigious fashion brands.

43. Burberry is working with a partner to make full use of leather materials to reduce waste.

44. Burberry's plan to destroy its unsold products worth millions of dollars aroused public indignation.

45. Burberry's change of marketing strategy to make a product available as soon as consumers see it on the fashion show did not turn out to be as effective as expected.

第二套 Do music lessons really make children smarter

Do music lessons really make children smarter

A. A recent analysis found that most research mischaracterizes the relationship between music and skills enhancement.

B. In 2004, a paper appeared in the journal *Psychological Science*, titled "Music Lessons Enhance IQ." The author; composer and psychologist Glenn Schellenberg had conducted an experiment with 144 children randomly assigned to four groups: one learned the keyboard for a year, one took singing lessons, one joined an acting class, and a control group had no extracurricular training. The IQ of the children in the two musical groups rose by an average

of seven points in the course of a year; those in the other two groups gained an average of 4.3 points.

C. Schellenberg had long been skeptical of the science supporting claims that music education enhances children's abstract reasoning, math, or language skills. If children who play the piano are smarter, he says, it doesn't necessarily mean they are smarter because they play the piano. It could be that the youngsters who play the piano also happen to be more ambitious or better at focusing on a task. Correlation, after all, does not prove causation.

D. The 2004 paper was specifically designed to address those concerns. And as a passionate musician, Schellenberg was delighted when he turned up credible evidence that music has transfer effects on general intelligence. But nearly a decade later, in 2013, the Education Endowment Foundation funded a bigger study with more than 900 students. That study failed to confirm Schellenberg's findings, producing no evidence that music lessons improved math and literacy skills.

E. Schellenberg took that news in stride while continuing to cast a skeptical eye on the research in his field. Recently, he decided to formally investigate just how often his fellow researchers in psychology and neuroscience make what he believes are erroneous - or at least premature - causal connections between music and intelligence. His results, published in May, suggest that many of his peers do just that.

F. For his recent study, Schellenberg asked two research assistants to look for correlational studies on the effects of music education. They found a total of 114 papers published since 2000. To assess whether the authors claimed any causation, researchers then looked for telltale verbs in each paper's title and abstract, verbs like "enhance", "promote", "facilitate", and "strengthen". The papers were categorized as neuroscience if the study employed a brain imaging method like magnetic resonance, or if the study appeared in a journal that had "brain", "neuroscience", or a related term in its title. Otherwise the papers were categorized as psychology. Schellenberg didn't tell his assistants what exactly he was trying to prove.

G. After computing their assessments, Schellenberg concluded that the majority of the articles erroneously claimed that music training had a causal effect. The overselling, he also found, was more prevalent among neuroscience studies, three quarters of which mischaracterized a mere association between music training and skills enhancement as a cause-and-effect relationship. This may come as a surprise to some. Psychologists have been battling charges that they don't do "real" science for some time - in large part because many findings from classic experiments have proved unreproducible. Neuroscientists, on the other hand, armed with brain scans and EEGs(脑电图), have not been subject to the same degree of critique.

H. To argue for a cause-and-effect relationship, scientists must attempt to explain why and how a connection could occur. When it comes to transfer effects of music, scientists frequently point to brain plasticity - the fact that the brain changes according to how we use it. When a child learns to play the violin, for example, several studies have shown that the brain region responsible for the fine motor skills of the left hand's fingers is likely to grow. And many experiments have shown that musical training improves certain hearing capabilities, like filtering voices from background noise or distinguishing the difference

between the consonants(辅音) 'b' and 'g'.

I. But Schellenberg remains highly critical of how the concept of plasticity has been applied in his field. "Plasticity has become an industry of its own," he wrote in his May paper. Practice does change the brain, he allows, but what is questionable is the assertion that these changes affect other brain regions, such as those responsible for spatial reasoning or math problems.

J. Neuropsychologist Lutz Jancke agrees. "Most of these studies don't allow for causal inferences," he said. For over two decades, Jancke has researched the effects of music lessons, and like Schellenberg, he believes that the only way to truly understand their effects is to run longitudinal studies. In such studies, researchers would need to follow groups of children with and without music lessons over a long period of time - even if the assignments are not completely random. Then they could compare outcomes for each group.

K. Some researchers are staring to do just that. The neuroscientist Peter Schneider from Heidelberg University in Germany, for example, has been following a group of children for ten years now. Some of them were handed musical instruments and given lessons through a school-based program in the Ruhr region of Germany called Jedem Kind ein Instrument, or "an instrument for every child," which was carried out with government funding. Among these children, Schneider has found that those who were enthusiastic about music and who practiced voluntarily showed improvements in hearing ability, as well as in more general competencies, such as the ability to concentrate.

L. To establish whether effects such as improved concentration are caused by music participation itself, and not by investing time in an extracurricular activity of any kind, Assal Habibi, a psychology professor at the University of Southern California, is conducting a five-year longitudinal study with children from low-income communities in Los Angeles. The youngsters fall into three groups: those who take after-school music, those who do after-school sports, and those with no structured afterschool program at all. After two years, Habibi and her colleagues reported seeing structural changes in the brains of the musically trained children, both locally and in the pathways connecting different parts of the brain.

M. That may seem compelling, but Habibi's children were not selected randomly. Did the children who were drawn to music perhaps have something in them from the start that made them different but eluded the brain scanners? "As somebody who started taking piano lessons at the age of five and got up every morning at seven to practice, that experience changed me and made me part of who I am today," Schellenberg said. "The question is whether those kinds of experiences do so systematically across individuals and create exactly the same changes. And I think that is that huge leap of faith."

N. Did he have a hidden talent that others didn't have? Or more endurance than his peers? Music researchers tend, like Schellenberg, to be musicians themselves, and as he noted in his recent paper, "the idea of positive cognitive and neural side effects from music training (and other pleasurable activities) is inherently appealing." He also admits that if he had children of his own, he would encourage them to take music lessons and go to university. "I would think that it makes them better people, more critical, just wiser in general," he said.

O. But those convictions should be checked at the entrance to the lab, he added. Otherwise, the work becomes religion or faith. "You have to let go of your faith if you want to be a scientist."

36. Glenn Schellenberg's latest research suggests many psychologists and neuroscientists wrongly believe in the causal relationship between music and IQ.
37. The belief in the positive effects of music training appeals to many researchers who are musicians themselves.
38. Glenn Schellenberg was doubtful about the claim that music education helps enhance children's intelligence.
39. Glenn Schellenberg came to the conclusion that most of the papers assessed made the wrong claim regarding music's effect on intelligence.
40. You must abandon your unverified beliefs before you become a scientist.
41. Lots of experiments have demonstrated that people with music training can better differentiate certain sounds.
42. Glenn Schellenberg's findings at the beginning of this century were not supported by a larger study carried out some ten years later.
43. One researcher shares Glenn Schellenberg's view that it is necessary to conduct long-term developmental studies to understand the effects of music training.
44. Glenn Schellenberg's research assistants had no idea what he was trying to prove in his new study.
45. Glenn Schellenberg admits that practice can change certain areas of the brain but doubts that the change can affect other areas.

第三套 Why facts don't change our minds

Why facts don't change our minds

- A. The economist J.K. Galbraith once wrote, "Faced with a choice between changing one's mind and proving there is no need to do so, almost everyone gets busy with the proof."
- B. Leo Tolstoy was even bolder: "The most difficult subjects can be explained to the most slow-witted man if he has not formed any idea of them already; but the simplest thing cannot be made clear to the most intelligent man if he is firmly persuaded that he knows already, without a shadow of a doubt, what is laid before him."
- C. What's going on here? Why don't facts change our minds? And why would someone continue to believe a false or inaccurate idea anyway? How do such behaviors serve us? Humans need a reasonably accurate view of the world in order to survive. If your model of reality is wildly different from the actual world, then you struggle to take effective actions each day. However, truth and accuracy are not the only things that matter to the human mind. Humans also seem to have a deep desire to belong.
- D. In *Atomic Habits*, I wrote, "Humans are herd animals. We want to fit in, to bond with others, and to earn the respect and approval of our peers. Such inclinations are essential to our survival. For most of our evolutionary history, our ancestors lived in tribes. Becoming separated from the tribe - or worse, being cast out - was a death sentence."
- E. Understanding the truth of a situation is important, but so is remaining part of a tribe. While these two desires often work well together, they occasionally come into conflict. In many circumstances, social connection is actually more helpful to your daily life than understanding the truth of a particular fact or idea. The Harvard psychologist Steven Pinker

put it this way, "People are embraced or condemned according to their beliefs, so one function of the mind may be to hold beliefs that bring the belief-holder the greatest number of allies, protectors, or disciples(信徒), rather than beliefs that are most likely to be true.

F. We don't always believe things because they are correct. Sometimes we believe things because they make us look good to the people we care about. I thought Kevin Simler put it well when he wrote, "If a brain anticipates that it will be rewarded for adopting a particular belief, it's perfectly happy to do so, and doesn't much care where the reward comes from - whether it's pragmatic(实用主义的) (better outcomes resulting from better decisions), social (better treatment from one's peers), or some mix of the two."

G. False beliefs can be useful in a social sense even if they are not useful in a factual sense. For lack of a better phrase, we might call this approach "factually false, but socially accurate." When we have to choose between the two, people often select friends and family over facts. This insight not only explains why we might hold our tongue at a dinner party or look the other way when our parents say something offensive, but also reveals a better way to change the minds of others.

H. Convincing someone to change their mind is really the process of convincing them to change their tribe. If they abandon their beliefs, they run the risk of losing social ties. You can't expect someone to change their mind if you take away their community too. You have to give them somewhere to go. Nobody wants their worldview torn apart if loneliness is the outcome.

I. The way to change people's minds is to become friends with them, to integrate them into your tribe, to bring them into your circle. Now, they can change their beliefs without the risk of being abandoned socially.

J. Perhaps it is not difference, but distance, that breeds tribalism and hostility. As proximity increases, so does understanding. I am reminded of Abraham Lincoln's quote, "I don't like that man. I must get to know him better."

K. Facts don't change our minds. Friendship does. Years ago, Ben Casnocha mentioned an idea to me that I haven't been able to shake: The people who are most likely to change our minds are the ones we agree with on 98 percent of topics. If someone you know, like, and trust believes a radical idea, you are more likely to give it merit, weight, or consideration. You already agree with them in most areas of life. Maybe you should change your mind on this one too. But if someone wildly different than you propose the same radical idea, well, it's easy to dismiss them as nuts.

L. One way to visualize this distinction is by mapping beliefs on a spectrum. If you divide this spectrum into 10 units and you find yourself at Position 7, then there is little sense in trying to convince someone at Position 1. The gap is too wide. When you're at Position 7, your time is better spent connecting with people who are at Positions 6 and 8, gradually pulling them in your direction.

M. The most heated arguments often occur between people on opposite ends of the spectrum, but the most frequent learning occurs from people who are nearby. The closer you are to someone, the more likely it becomes that the one or two beliefs you don't share will bleed over into your own mind and shape your thinking. The further away an idea is from your current position, the more likely you are to reject it outright. When it comes to changing people's minds, it is very difficult to jump from one side to another. You can't jump

down the spectrum. You have to slide down it.

N. Any idea that is sufficiently different from your current worldview will feel threatening. And the best place to ponder a threatening idea is in a non-threatening environment. As a result, books are often a better vehicle for transforming beliefs than conversations or debates. In conversation, people have to carefully consider their status and appearance. They want to save face and avoid looking stupid. When confronted with an uncomfortable set of facts, the tendency is often to double down on their current position rather than publicly admit to being wrong. Books resolve this tension. With a book, the conversation takes place inside someone's head and without the risk of being judged by others. It's easier to be open-minded when you aren't feeling defensive.

O. There is another reason bad ideas continue to live on, which is that people continue to talk about them. Silence is death for any idea. An idea that is never spoken or written down dies with the person who conceived it. Ideas can only be remembered when they are repeated. They can only be believed when they are repeated. I have already pointed out that people repeat ideas to signal they are part of the same social group. But here's a crucial point most people miss: People also repeat bad ideas when they complain about them. Before you can criticize an idea, you have to reference that idea. You end up repeating the ideas you're hoping people will forget - but, of course, people can't forget them because you keep talking about them. The more you repeat a bad idea, the more likely people are to believe it.

P. Let's call this phenomenon Clear's Law of Recurrence: The number of people who believe an idea is directly proportional to the number of times it has been repeated during the last year - even if the idea is false.

36. According to the author, humans can hardly survive if separated from their community.

37. People often accept false beliefs because they prioritize social bonds rather than facts.

38. Most often people learn from those close to them.

39. Sometimes people adopt certain beliefs in order to leave a favorable impression on those dear to them.

40. Compared with face-to-face communication, books often provide a better medium for changing people's beliefs.

41. On many occasions in daily life, people benefit more from their social bonds than from knowing the truth.

42. If you want to change somebody's beliefs, you should first establish social connection with them.

43. Humans cannot survive without a fair knowledge of the actual world.

44. Repetition of bad ideas increase their chances of being accepted.

45. Nobody is willing to give up their beliefs at the risk of getting isolated.

答案

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